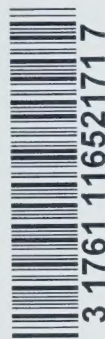


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ENVIRONMENTAL ASSESSMENT BOARD

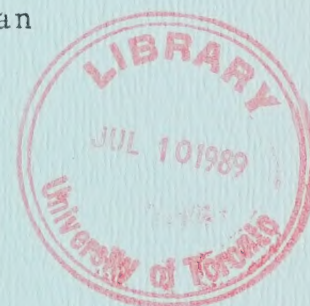
VOLUME: 117

DATE: Wednesday, June 21st, 1989

BEFORE: M.I. JEFFERY, Q.C., Chairman

E. MARTEL, Member

A. KOVEN, Member



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HEARING ON THE PROPOSAL BY THE MINISTRY OF NATURAL
RESOURCES FOR A CLASS ENVIRONMENTAL ASSESSMENT FOR
TIMBER MANAGEMENT ON CROWN LANDS IN ONTARIO

IN THE MATTER of the Environmental
Assessment Act, R.S.O. 1980, c.140;

- and -

IN THE MATTER of the Class Environmental
Assessment for Timber Management on Crown
Lands in Ontario;

- and -

IN THE MATTER of an Order-in-Council
(O.C. 2449/87) authorizing the
Environmental Assessment Board to
administer a funding program, in
connection with the environmental
assessment hearing with respect to the
Timber Management Class
Environmental Assessment, and to
distribute funds to qualified
participants.

Hearing held at the Ramada Prince Arthur
Hotel, 17 North Cumberland St., Thunder
Bay, Ontario, on Wednesday, June 21st,
1989, commencing at 9:00 a.m.

VOLUME 117

BEFORE:

MR. MICHAEL I. JEFFERY, Q.C.	Chairman
MR. ELIE MARTEL	Member
MRS. ANNE KOVEN	Member

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MS. Y. HERSCHER)	
MR. B. CAMPBELL)	MINISTRY OF ENVIRONMENT
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MR. G.L. FIRMAN	
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MR. R. LINDGREN)	
MR. P. SANFORD)	KIMBERLY-CLARK OF CANADA
MS. L. NICHOLLS)	LIMITED and SPRUCE FALLS
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MR. M.O. EDWARDS	FORT FRANCES CHAMBER OF COMMERCE
MR. P.D. McCUTCHEON	GEORGE NIXON

(iii)

APPEARANCES: (Cont'd)

MR. C. BRUNETTA

NORTHWESTERN ONTARIO
TOURISM ASSOCIATION

I N D E X O F P R O C E E D I N G S

<u>Witness:</u>	<u>Page No.</u>
<u>J. JOSEPH CHURCHER,</u> <u>EDWARD ISKRA,</u> <u>ROBERT L. GALLOWAY,</u> <u>ROBERT A. CAMPBELL,</u> <u>MICHAEL EDWIN BUSS,</u> <u>PETER PHILLIP HYNARD,</u> <u>CINDY STERN KRISHKA,</u> <u>STEPHEN NICHOLSON, Resumed</u>	19624
Continued Cross-Examination by Ms. Seaborn	19624
Re-Direct Examination by Mr. Freidin	19661

1 ---Upon commencing at 9:10 a.m.

2 THE CHAIRMAN: Thank you. Be seated
3 please.

4 Ms. Seaborn, just before we recommence
5 with your examination, the Board would just like to
6 allude to a couple of the procedural matters raised by
7 Ms. Cronk yesterday.

8 We just had a brief opportunity to
9 discuss those matters and the Board has not been able
10 to contact Mr. Turkstra yet either, so we don't know
11 what his availability would be as to the question of
12 whether or not additional parties would want to call
13 Dr. Baskerville as their own witness.

14 We feel that Mr. Turkstra should be a
15 party to those discussions simply because he will be
16 acting for the Board as the Board's counsel in
17 connection with the Board calling Dr. Baskerville and
18 will also be acting, in a sense, for Dr. Baskerville.

19 And just so that we have in our minds,
20 Ms. Cronk, the issue straight, your concern as the
21 Board understands it, was that Dean Baskerville's
22 witness statement was due towards the end of August?

23 MS. CRONK: That's my understanding, Mr.
24 Chairman.

25 THE CHAIRMAN: And how does that impinge

1 necessarily upon the fact that another party may wish
2 to call him at some further point down the road?

3 MS. CRONK: It doesn't at all, it is just
4 a practical matter that we were aware was happening in
5 tandem. The substantive concern that's being raised is
6 whether it is appropriate at all for another party to
7 be calling Dean Baskerville as a witness in the face of
8 a decision by the Board to have Dean Baskerville appear
9 in the role of a neutral witness to speak to specified
10 issues. And it may well be, Mr. Chairman, you will
11 receive submissions as to the propriety of that.

12 Whether or not a decision on that issue
13 is reached, it may be that the Board -- our thinking
14 was that if the Board was aware that one or more
15 parties was considering calling Dean Baskerville, the
16 Board might itself wish to reconsider the timing of
17 which Dean Baskerville was called on behalf of the
18 Board or the implications of doing it at all.

19 So we wanted to raise the issue so the
20 Board was aware of the information that was available
21 to us so that if you considered it appropriate, you
22 could inform the parties of the thinking on the matter.

23 I raise the timing of the witness
24 statement only because if a decision, for example, were
25 to be reached that Dean Baskerville's evidence on

1 behalf the Board were to be delayed, one wouldn't want
2 them spending the summer preparing the witness
3 statement.

4 THE CHAIRMAN: Okay. Thank you for that
5 clarification.

6 Well, the Board certainly agrees that
7 submissions may want to be made by parties concerning
8 the issue as to whether Dean Baskerville should be
9 called in the two capacities, as the Board witness and
10 as a witness for another party.

11 That will take perhaps a little bit of
12 time to dispose of, if you will, and all parties should
13 have notice of the issue being discussed and, as I
14 mentioned, we would want Mr. Turkstra to be present at
15 the time of those submissions as well.

16 Whether that can be accomplished in the
17 next week is doubtful and it is doubtful because we
18 don't have any indication at this time as to whether
19 other parties want to call Dean Baskerville.

20 What we are suggesting the Board would do
21 is, over the next three or four days, send out a notice
22 to all parties on the full-time correspondence list
23 requesting an indication as to whether any party wishes
24 to call Dean Baskerville as their own witness, and then
25 further indicate in the notice that submissions will be

1 made, or a time for submissions to be made will be set
2 to deal with that issue.

3 Now, it comes down to the timing, as to
4 when we can set that time, bearing in mind that we are
5 rising at the end of next week for the month of July
6 and the first week of August. It is doubtful, frankly,
7 that we can hold that session prior to coming back in
8 August. I just don't see how we can physically
9 accommodate that.

10 So it will likely be, I suggest, at the
11 opening of the session in August.

12 MS. CRONK: Thank you, Mr. Chairman.

13 THE CHAIRMAN: Now, with respect to your
14 other concern about the timing of the witness
15 statements for OFIA and the time for submitting
16 interrogatories.

17 The first issue we discussed this morning
18 may impinge upon that slightly, if the Board were to
19 reverse its position on the calling of Dean
20 Baskerville.

21 But it seems to us that, firstly, there
22 would be no difficulty, in the Board's view, of
23 indicating that the time for submitting
24 interrogatories, which has been set at 40 days, would
25 remain the same with there being no obligation on OFIA

1 to respond to the interrogatories until the end of the
2 40-day period, until the end of the 40-day period
3 meaning you would have --

4 MS. CRONK: I am sorry, sir?

5 THE CHAIRMAN: Sorry, within 15 days from
6 the end--

7 MS. CRONK: Thank you.

8 THE CHAIRMAN: --from the end of the
9 40-day period, that's what I meant to say. So you
10 would not have to have your expert witnesses and
11 consultants available through the whole period.

12 MS. CRONK: That will help considerably,
13 Mr. Chairman. Thank you.

14 THE CHAIRMAN: Now, with respect to the
15 fact that that can bring it to a maximum of 55 days
16 with the witness statement to be delivered no sooner
17 than 60 days before the calling of the panel, we don't
18 feel that would necessarily be a problem with the first
19 panel because it is unlikely that your case would
20 commence immediately following the Ministry's case.

21 Why? Because we are suggesting that Dean
22 Baskerville would probably be slotted in at the end of
23 the Ministry's case. That would probably take, we
24 don't know for sure, but probably a couple of weeks in
25 any event.

1 Depending on when the Ministry's case
2 finishes, we might be getting close to the end of the
3 year, including Dean Baskerville's appearance, if he
4 appears at that time. So we feel that there will
5 probably be sufficient time for you to submit your
6 witness statements at least 60 days before the end of
7 the Ministry's case, in any event.

8 We are hoping perhaps it could be
9 submitted before that, if at all possible, then there
10 would be at least 60 days before the end of the
11 Ministry's case and then the appearance of Dean
12 Baskerville.

13 There may be holidays, in any event, in
14 that period as well and there is a possibility,
15 depending on what happens in September, that we may
16 slot in an additional satellite hearing at that time as
17 well.

18 MS. CRONK: Thank you. That is very
19 helpful, Mr. Chairman.

20 THE CHAIRMAN: I think you will find
21 there is sufficient time to do all of that and the
22 Board still has to conduct a scoping session as well
23 with enough time between the end of the scoping session
24 and the actual witness statement.

25 Now, we will take a good look at the

1 procedural ruling we made in September to make sure
2 that what we are saying here will also apply to other
3 parties down the road in terms of not having to have
4 their experts available throughout the full period of
5 the 40 days.

6 MS. CRONK: I should say, Mr. Chairman,
7 the reason we raised it yesterday, quite apart from the
8 immediate anticipation of the practical difficulty, we
9 understood at the time that the Board made that order
10 in September that if counsel felt any element of it,
11 with respect, might be improved upon in a practical
12 sense, we were to bring that to the attention of the
13 Board.

14 THE CHAIRMAN: We appreciate that.

15 MS. CRONK: Should we find that in
16 future, I take it we are to bring that to the attention
17 of the Board?

18 THE CHAIRMAN: We want those procedural
19 rulings in a practical sense. If there is any
20 difficulty, we would like to know about it and, if
21 required, we will issue an amendment to that ruling, if
22 necessary.

23 MS. MURPHY: If I might add an
24 observation from our experience.

25 Particularly early in the hearing, when

1 you look at the procedural hearing, one of the things
2 we found very difficult was where the order requires a
3 person to do something 60 days before an event that has
4 no date, it makes it very difficult. It is impossible
5 to do something 60 days before a date that is
6 unascertainable.

7 THE CHAIRMAN: We made -- we realized
8 that when we made that particular ruling, but we wanted
9 to not have a large gap between the end of your case
10 and the commencement of the Industry's case, not
11 knowing at that time that we might be calling a witness
12 of our own inbetween, et cetera.

13 So we had to somehow give the parties
14 enough notice to have that witness statement submitted
15 in enough time, so we just picked an arbitrary period
16 of 60 days before your case, knowing full well we
17 wouldn't know when the end of your case was coming.

18 MS. MURPHY: It is an observation that
19 may be kept in mind when we start dealing with things
20 serially and things like that.

21 THE CHAIRMAN: We will keep that in mind.
22 We realize it is difficult for the parties to ascertain
23 when they are going to finish, but when it gets closer
24 to the event, we can adjust the matters accordingly.

25 MS. CRONK: Thank you very much, Mr.

1 Chairman.

2 THE CHAIRMAN: Ms. Seaborn?

3 MS. SEABORN: Good morning, members of
4 the panel.

5 J. JOSEPH CHURCHER,
6 EDWARD ISKRA,
7 ROBERT L. GALLOWAY,
8 ROBERT A. CAMPBELL,
9 MICHAEL EDWIN BUSS,
PETER PHILLIP HYNARD,
CINDY STERN KRISHKA,
STEPHEN NICHOLSON, Resumed

10 CONTINUED CROSS-EXAMINATION BY MS. SEABORN:

11 Q. Mr. Buss, I would like to start with
12 a few questions for you. Your evidence was directed at
13 explaining the potential environmental effects of
14 mechanical and manual tending on the aquatic,
15 terrestrial and socio-economic environment?

16 MR. BUSS: A. That's correct.

17 Q. And you specifically excluded from
18 your evidence any discussion of potential effects of
19 herbicide use?

20 A. That is also correct.

21 Q. And with respect to the potential
22 effects of tending on the aquatic environment, your
23 evidence was that there is very little reported
24 literature; is that correct?

25 A. Yes, separating the effects of

1 tending from other forest management activities. Most
2 of the information that's available deals with harvest
3 and renewal.

4 Q. Thank you. And you also stated in
5 your evidence that in terms of preventing or mitigating
6 effects to the aquatic environment you rely on the
7 application of the Timber Management Guidelines for the
8 Protection of Fish Habitat?

9 A. Yes.

10 Q. And in previous panels the Board has
11 heard evidence as to the provisions of the Fish Habitat
12 Guidelines and their application across the area of the
13 undertaking. Are you aware generally of that evidence?

14 A. Generally, yes.

15 Q. You are aware that areas of concern
16 would be identified through the application of the
17 guidelines prior to harvest and renewal prescriptions?

18 A. Yes.

19 Q. So that any harvesting that would
20 occur in the vicinity of a waterbody could only be
21 undertaken in accordance with the provision of the Fish
22 Habitat Guidelines?

23 A. Yes, that's correct.

24 Q. Now, if as a result of the
25 application of the guidelines an area of concern is

1 identified resulting in no harvest, then there would be
2 no reason to conduct tending operations in that
3 reserve; would you agree with that?

4 A. Yes, that's correct.

5 Q. Could you turn please to 366 of Panel
6 12 statement of evidence, which 366 is Volume II.

7 MS. CRONK: What page?

8 MS. SEABORN: Page 366.

9 Q. Do you have that in front of you, Mr.
10 Buss.

11 MR. BUSS: A. Yes, I do.

12 Q. The fourth line down from the top of
13 the page starts with the word 'consistent'. Do you see
14 that?

15 A. Yes.

16 Q. And it says:

17 "Consistent with these guidelines,
18 salvage cutting is not carried out in
19 certain shoreline areas, such as those
20 adjacent to coldwater fish habitat."

21 And then you go on to give an example and
22 it says:

23 "For example, timber which has been
24 damaged by insects in a reserve on a lake
25 trout lake would not normally be

1 salvaged. "

2 Now, would you agree with me that going
3 into a reserve to salvage timber would be an exception
4 to the application of the Fish Habitat Guidelines?

5 A. You are talking about a salvage cut
6 of the insect damaged trees that are in a reserve on a
7 lake trout lake?

8 Q. That's right.

9 A. I believe the guidelines provide for
10 selection harvesting within the area of concern if you
11 can still maintain water quality or don't jeopardize
12 the quality or the area of concern or value that you
13 were trying to protect.

14 Salvage cutting, as it is described by
15 Peter Hynard, in terms of tending is, would be the
16 removal of just select trees, not the same thing as
17 salvage harvesting which was described I think by Mr.
18 Hynard also in Panel 10.

19 So the kind of cut that might -- could
20 feasibly take place or hypothetically take place would
21 be in terms of a selection cut. Because you don't want
22 to be removing select trees, it wouldn't be a large
23 harvest.

24 Q. The situation I am thinking of, Mr.
25 Buss, is that you have a reserve that contains timber

1 that's destroyed by insects and it may be that for
2 forest purposes one would want to go in there and
3 salvage the standing trees.

4 What I am suggesting is that for the
5 purposes of water quality there may be another reason
6 to have that reserve left as it is without going in and
7 salvaging. Would you agree with that?

8 A. Yes.

9 Q. And that that reserve would be there
10 as a value that still affords water quality protection?

11 A. Yes, that's correct. If you thought
12 that the harvest operation or salvage operation was
13 going to damage soil or cause potential erosion or
14 anything of that nature, then certainly the terms of
15 the reserve would still be implied or imposed.

16 Q. Okay.

17 Q. Mr. Nicholson, could you turn to page
18 166 of the Panel 13 witness statement. It is Exhibit
19 604A.

20 MR. NICHOLSON: A. It is the one
21 identified as buffer zones?

22 Q. That's right. And these buffer zones
23 are identified as Appendix 4 to MNR's policy FRO
24 410-10; correct?

25 A. That's correct.

1 Q. And these guidelines were developed
2 jointly by MOE and MNR in the mid-1980s?

3 A. Yes.

4 Q. And could you confirm for me that
5 when a spray permit is issued by MOE, a copy of those
6 buffer zones are generally included with the permit?

7 A. The permit being issued by MOE?

8 Q. Yes.

9 A. Yes.

10 Q. And it is my understanding that
11 adherence to these buffer zones are mandatory when
12 conducting a spray of herbicides and chemical
13 insecticides?

14 A. Mandatory to within the limit of our
15 technical capability.

16 Q. What do you mean 'within the limit of
17 your technical capability'?

18 A. We adhere to the buffer zones, but if
19 there was an occurrence where there is an area sprayed
20 on a buffer zone inadvertently that would be, I guess,
21 against our policy, if you will. So from that point of
22 view we attempt to adhere to it, it is mandatory, but
23 those occurrences may happen from time to time.

24 Q. I am talking about inadvertence
25 aside. I am saying generally the thrust is that these

1 guidelines are to be followed in the plan of an aerial
2 spray?

3 A. That's correct.

4 Q. And the purpose of the buffer is
5 essentially in terms of water quality, to ensure that
6 waterbodies are not sprayed; would you agree with that?

7 A. Just looking at waterbodies only?

8 Q. Yes.

9 A. And only those waterbodies deemed --
10 shown here as significant or sensitive.

11 Q. And it is my understanding the way
12 these guidelines work is that the idea is that a spray
13 is permitted up to the edge of the buffer, so that if
14 there is any drift, that would be caught by the buffer
15 and there wouldn't be any spray over the waterbody?

16 A. That's the general purpose, yes.

17 Q. And that's the purpose of not having
18 the spray up to the water's edge because you don't have
19 that buffer to catch the drift in the event there is a
20 drift?

21 A. It is my understanding even if there
22 was a direct application on the water that there would
23 be no significant environmental impact of that but, as
24 always, on the side of caution, we put these buffer
25 zones in place.

1 Q. I am not suggesting any adverse
2 effects per se, we will be dealing with that whole
3 topic in August, I am looking at the moment at the
4 procedure for the purpose of the guidelines.

5 A. The purpose of them is to minimize in
6 an effort to prevent any movement of the spray into a
7 no-spray area.

8 Q. And within the permitting system for
9 forestry use of herbicides there is no registered use
10 patterns for application on water; correct?

11 A. Say that again, please?

12 Q. Maybe Mr. Iskra --

13 A. No, just repeat your question. I
14 didn't catch it all.

15 Q. All I am suggesting is within the
16 permitting system for forestry use of herbicides you
17 don't give a permit for use of a herbicide on a
18 waterbody?

19 A. Not for forestry purposes, no.

20 Q. Right. Now, Mr. Buss, perhaps you
21 can help me in this area because I am going to be
22 dealing again with the Fish Habitat Guidelines.

23 Could you have in front of you, please,
24 Exhibit 304 which is the policy that accompanies the
25 Fish Habitat Guidelines.

1 MR. BUSS: A. Yes, I have those.

2 Q. Could you turn to page 2 of the
3 policy.

4 A. Yes.

5 Q. Now, page 2 of the policy lists the
6 waters to which the guidelines would be applied. Do
7 you see that?

8 A. Yes.

9 Q. It is under No. 1, Application?

10 A. Yes, I have that.

11 Q. Now, I am not going to go into this
12 in detail, the Board has heard a large amount of the
13 testimony with respect to both this policy and the
14 guidelines themselves.

15 Now, just looking at this policy, I would
16 like you to also have a look at one of MOE's
17 interrogatories which is filed as 610 and it is
18 Question 23. Do you have that?

19 A. Yes, Question 2.

20 Q. And you will see that the
21 interrogatory that we asked was:

22 "Please list other values which would
23 preclude aerial spraying?"

24 And the response directed us to the other
25 values that were identified in a document entitled:

1 Background Information, Other Resource Features, Land
2 Uses and Values which is Exhibit 5A, and then the last
3 paragraph of the answer said:

4 "As you recall, that list was developed
5 in conjunction with the Ministry of the
6 Environment and includes the values which
7 were located within the buffer zones for
8 aerial application of pesticides
9 discussed in Panel 13."

10 Now, I just want to briefly look at the
11 values that are identified in Exhibit 5A as the
12 response directs us to those values.

13 MS. SEABORN: And, Mr. Chairman, those
14 values are found in Attachment 2 to Exhibit 5A and it
15 is the seventh page of my copy.

16 Q. Do you have that in front of you, Mr.
17 Buss?

18 MR. BUSS: A. Yes, I do.

19 Q. Now, under the fisheries there is a
20 list of fish communities by lake stream, bait fish
21 lakes, spawning areas, nursery areas, migration areas,
22 headwater lakes, identified assets and sensitive lakes.

23 Would you agree with me that in a general
24 way the values that are listed in Exhibit 5A would be
25 covered by the areas that are listed in the fish

1 habitat policy which is filed as Exhibit 304 and that
2 is the list where -- that's under No. 1:

3 "The guidelines shall be applied to the
4 following waters..."

5 A. Yes, I think in a general way they
6 cover the same areas.

7 Q. Thank you. And would you agree that
8 if the application of the fish guidelines resulted in
9 an area of concern, then a buffer would be in place for
10 the purpose of defining the limit of an area spray?

11 A. Under which guidelines, the ones that
12 come with the permit or the ones described in the
13 Ministry's Fisheries Habitat Guidelines?

14 Q. What I am suggesting is that if you
15 had an area of concern identified through the
16 application of the Fish Habitat Guidelines, then there
17 would also be a buffer that would be in place for the
18 purpose of defining the limits of your spray?

19 A. The guidelines from the fisheries
20 management -- the Fisheries Habitat Guidelines don't
21 specifically talk or specifically relate to the
22 application of chemicals.

23 It is my understanding that those
24 guidelines that Mr. Nicholson just referred, for
25 example, what he referred to in that question are

1 specifically designed to deal with the application of
2 chemicals. There is overlap, of course, because we are
3 dealing -- talking about the same area on the land. So
4 with that in mind, would you repeat the question,
5 please?

6 Q. Let me ask something else first.
7 Given that there is unlikely to be any harvesting in an
8 area of concern that's created pursuant to the Fish
9 Habitat Guidelines; correct?

10 A. There can be harvesting.

11 Q. In certain situations?

12 A. Right.

13 Q. But often there is unlikely to be
14 harvesting in that reserve that's created under the
15 Fish Habitat Guidelines?

16 A. Or some harvest of some sort, yes.

17 Q. In a situation where you are not
18 harvesting within a reserve, it would not be necessary
19 to apply any aerial herbicide within that reserve
20 either?

21 A. That's correct.

22 Q. So for the purposes of defining the
23 limits of your aerial spray, you would essentially be
24 taking the buffer zone that you have set up under the
25 Fish Habitat Guidelines as the limit of your spray

1 irrespective of what's in the buffer zone recommended
2 for aerial application?

3 THE CHAIRMAN: Why couldn't you have a
4 larger buffer zone under the buffer zone guidelines;
5 that is, larger than the buffer zone that might be
6 created through an area of concern under the Fish
7 Habitat Guideline?

8 MS. SEABORN: I completely agree with
9 that, Mr. Chairman. I was going to get to that point
10 with Mr. Buss. I suggest that is quite common.

11 I am thinking of the opposite situation
12 where you may have a reserve -- sorry, the area of
13 concern created under the Fish Habitat Guidelines that
14 is wider than the buffer zone guidelines.

15 Q. And, in that situation, you would
16 apply the area of concern under the Fish Habitat
17 Guidelines rather than the spray guidelines?

18 MR. BUSS: A. I think the approach then,
19 from the Ministry's standpoint, is to use whichever is
20 more conservative in this case. And I am not sure, but
21 I would have to look at it to see whether there would
22 be a wider one under the fisheries guidelines as there
23 would be under the spray buffer guidelines, so...

24 Q. So it would be your position that you
25 would choose the most conservative one?

1 A. Yes.

2 Q. And could you just refer to page 89
3 of Exhibit 604C which is the ESSA Report.

4 A. Yes, I have page 89.

5 Q. And the only comment I wanted to
6 bring to the Board's attention at this stage was that
7 in a discussion of potential effects of herbicides in
8 the ESSA Report, on the first full paragraph on page
9 89, it states:

10 "In addition, the Ministry's Timber
11 Management Guidelines for the Protection
12 of Fish Habitat provide for the use of
13 buffer zones in areas of concern (with
14 respect to fish habitat). Consequently,
15 harvesting within many riparian areas
16 does not occur or is greatly restricted.
17 In such cases there is usually no
18 rationale for herbicide use for the
19 purposes of silviculture. Thus even
20 ground-based application of herbicides
21 will not have any effects on riparian
22 vegetation."

23 That statement is essentially consistent,
24 I believe, with the answer you earlier gave to me--

25 A. Yes.

1 Q. --would you agree?

2 MR. NICHOLSON: A. I think it is worth
3 noting these buffer zones, as they were designed, were
4 considered as minimums and if there is other concerns,
5 such as Mr. Buss has been talking about, then they
6 would supersede these.

7 Q. Thank you. And, Mr. Buss, just a
8 couple more questions on this. Would you agree that in
9 the situation where the fish guidelines permit a 50 per
10 cent cut on the shoreline, that area wouldn't normally
11 be aerially treated because in that event the aerial
12 spray buffers would prevent spraying to the water's
13 edge?

14 MR. BUSS: A. Yes, that's my
15 understanding.

16 Q. Your option in that situation would
17 be a ground herbicide application or manual tending?

18 A. Yes. In many cases we would still be
19 looking at the effect of that tending. If it might
20 impinge on the value we were trying to protect, we may
21 allow harvest but if through some other subsequent
22 activity of renewal or tending -- then we probably
23 would restrict that.

24 Q. And would you confirm for me that all
25 waterbodies that require protection through the Fish

1 Habitat Guidelines will also receive protection from
2 the aerial application of pesticides through the buffer
3 zone guidelines?

4 A. Areas that would be identified by
5 fisheries -- I am trying to paraphrase your question.
6 Areas that would be identified in the fisheries
7 guidelines would also be protected by the buffer zones
8 by aerial spraying?

9 Q. That's right.

10 A. Yes.

11 Q. And, Mr. Churcher, I note looking at
12 the chart on page 166 that there is no buffer zones for
13 BT; is that correct?

14 MR. CHURCHER: A. Yes, that's correct.

15 Q. And would you agree with me that from
16 a planning point of view, when you are putting together
17 a spray program, it is a little easier dealing with BT,
18 you don't have to worry about buffer zones, per se,
19 when you are looking at your areas of operations?

20 A. Yes, that would be a fair statement.

21 Q. And I note as well that under 'other
22 than herbicides' -- which are essentially chemical
23 insecticides, correct?

24 A. Yes, that's right.

25 Q. That those buffer zones are two times

1 the buffer zones for herbicides?

2 A. Yes.

3 Q. Mr. Buss, in your evidence-in-chief
4 when you were describing how tending is a component of
5 almost every harvest operation in the Great Lakes/St.
6 Lawrence region. Do you recall that evidence?

7 MR. BUSS: A. Yes.

8 Q. And you were discussing your view of
9 the area of concern planning process and you explained
10 that the results that you could expect in the field
11 were very much dependent on how people applied
12 foresters' prescriptions. Would be that be a fair
13 summary?

14 A. Yes.

15 Q. And you gave the example of providing
16 shelter for deer and said that while you had said on
17 paper that you wanted to protect the hemlock trees for
18 deer shelter, when the logger went out and felled the
19 tree there was a problem?

20 A. That's correct.

21 Q. And you said that had your
22 instructions been more specific, the logger could have
23 girdled that tree which would have effectively removed
24 the tree from the stand, but would have kept the deer
25 cover?

1 A. Yes. The reference there was really
2 to instructions to the marking crew that actually mark
3 the timber. The logger -- it wasn't up to the logger,
4 he could make any choice he wanted after it was marked
5 the way it was. It could have been marked specifically
6 for one type of felling or another.

7 Q. I'm sorry, right. Now, you made a
8 mention to be concerned about adherence to rules. And
9 What I'm suggesting is, in the example you gave us,
10 isn't this an example one where you could say that had
11 there been a rule about how you marked trees for the
12 purposes of protecting deer shelter, that this sort of
13 thing wouldn't happen?

14 A. The implication where that dealt with
15 rules was saying that, to make a rule that in every
16 case where you are applying that activity, that tending
17 activity to all parts of the areas of the undertaking
18 might not be applicable in another area because you
19 would have people going evaluating whether they need to
20 apply this rule and, in fact, they weren't doing that
21 kind of tending.

22 In other words, it's a checklist, it's
23 laborious going through all of these and evaluating
24 each of those situations that may not fit at all.

25 Q. Well, I don't want you to

1 misinterpret me to the extent that I am not suggesting
2 that we have rules for everything in the field. What
3 I'm suggesting is that in that particular example you
4 gave, it struck me that that was a perfect example
5 where, if it was set out in your prescription as to how
6 you should protect deer shelter, then in any other
7 management unit where that was an objective, you would
8 be able to prevent that sort of incident of the marker
9 happening again?

10 A. Yes, you could do that and
11 probably -- there isn't a set out rule you, but when we
12 deal with the tree markers in the courses now that we
13 hold for them where we have an opportunity to give them
14 background in order to see where we are going with the
15 prescription.

16 What it really comes down to is how this
17 tree marker views the situation, in a given situation
18 and it may be that a tree could be removed and also it
19 could be that the tree, if it had an economic value,
20 that there was a possibility of getting it out of the
21 stand without causing damage, they could do it.

22 So it's kind of -- it's trying to make
23 this rule something that the marker uses, it's in his
24 brain and he views the situation with, rather than
25 something where he comes in and says: Well, you can't

1 cut trees here.

2 Q. It's a question of that sort of
3 operation becoming normal practice and having the
4 marker have that sort of mind set?

5 A. That's correct, exactly.

6 Q. Mr. Nicholson, could you have a look
7 at Exhibit 640 which was the number of recordable and
8 reportable incidents on MNR pesticide operations in the
9 area of the undertaking.

10 You introduced this exhibit, am I
11 correct, exhibit 640?

12 MR. NICHOLSON: A. I don't know if I
13 introduced it directly, but I'm familiar with it.

14 Q. Okay, that's fine. Could you turn to
15 page 6, please. Now, under Cochrane, and I'm just
16 using this as an example, the last paragraph it says:

17 "MOE was informed. No adverse
18 environmental impacts were noted."

19 Do you see that?

20 A. Yes, I do.

21 Q. Do you know whether -- was that an
22 assessment that was done by MOE or an assessment done
23 by MNR?

24 A. That particular incident, I do not
25 know if it was either MOE or MNR. Usually in a

1 situation like that, the standard procedure is that
2 they go out together and take a look at it.

3 Q. The reason why I'm interested is that
4 the next one down under -- sorry, on page 6, on the
5 same page it talks about:

6 "A joint inspection resulted, but no
7 major environmental damaged was
8 expected."

9 And I'm wondering, looking at these two
10 different comments, whether that means that in the
11 second incident it would have been a joint MOE/MNR
12 report whereas the one above it was done by either MNR
13 or MOE?

14 A. That could well be one. One thing I
15 think is worth noting is the significance of the size
16 in those two incidents, and it could be either way.

17 Q. On the other examples - and won't I
18 go through them all - there are a number of comments
19 such "as no major environmental damage was noted".
20 There is that comment under Kapuskasing twice or three
21 times at least.

22 Would you know whether that was an
23 evaluation done by MNR or by MOE?

24 A. Specifically, I wouldn't know.

25 MS. SEABORN: If I could just have a

1 moment, Mr. Chairman.

2 Thank you, gentlemen. Those are all my
3 questions, Mr. Chairman.

4 THE CHAIRMAN: Thank you, Ms. Seaborn.

5 MR. ISKRA: Mr. Chairman, I have one
6 outstanding item in the form of an undertaking from
7 yesterday on behalf of Ms. Bair-Muirhead and it's in
8 response to questions regarding, in Sioux Lookout
9 District, public notification.

10 I contacted Sioux Lookout and they
11 informed me that all the written and media notification
12 for aerial herbicide operations was in English only.
13 The only Oji/Cree notification was in the form of a
14 timber management plan notification in the monthly
15 publication Wawatai.

16 THE CHAIRMAN: Thank you.

17 Mr. Freidin, are you going to require
18 some time?

19 MR. FREIDIN: 10:30?

20 THE CHAIRMAN: Very well.

21 MS. MURPHY: Mr. Chairman, I delivered a
22 letter to the office about the community hearings and
23 we haven't had a chance to distribute it to my friends,
24 but you might want to review that in the meantime.

25 THE CHAIRMAN: Okay, thank you.

1 MS. MURPHY: (handed)

2 ---On recessing at 9:50 a.m.

3 ---On resuming at 10:30 a.m.

4 THE CHAIRMAN: Thank you. Be seated,
5 please.

6 Ms. Murphy, if you would like to deal,
7 just before we start with Mr. Freidin's re-examination,
8 with your letter, we can do that.

9 The Board essentially doesn't have any
10 difficulty with the suggestions in your letter in that,
11 as we interpret the letter, there will be the witnesses
12 you are suggesting provided, and any members of the
13 public will have an opportunity to question those
14 witnesses on any concerns that have arisen.

15 We would suspend the rule about a witness
16 not being allowed to confer with anybody under
17 cross-examination. I think it's reasonable in the
18 circumstances, particularly when they may have to
19 inform themselves about events in other districts, et
20 cetera.

21 And we are suggesting that with respect
22 to the Ministry's earlier suggestion of perhaps holding
23 an open house of some kind whereby there would be
24 members of the Ministry there to answer questions
25 outside of the formal satellite hearing session, the

1 Board has no objection to that, provided that it is
2 conducted, if the Ministry wishes to have an open
3 house, on the same day; not on a different day from the
4 date that the hearing was going to be held.

5 We are suggesting that we would commence
6 the hearing probably at two in the afternoon of the
7 particular day and run through, depending on the number
8 of people that wish to address the Board, through to
9 the evening. We would probably, in any event, hold an
10 evening session to at least catch those people who
11 couldn't turn out during the day. But we do not want
12 the Ministry to be holding an open house on a day other
13 than the day of the hearing.

14 In other words, you would hold it, if you
15 wished, in the morning and it would be open, in terms
16 of the open house, until the hearing started.

17 The reason for that is specific; the
18 Board does not want to convey to the public the idea
19 that if they want to find out about this they should be
20 there on more than one day. We think it's an
21 inconvenience to the public, the idea is to make these
22 satellite hearings as convenient and as accessible as
23 possible to the public. We don't want any
24 misinterpretation that if they show up on an
25 alternative date, get the benefit of the Ministry's

1 open house, then perhaps they shouldn't show up for the
2 satellite hearing, or vice versa.

3 MS. MURPHY: Well, Mr. Chairman, my
4 advice from the people at the Ministry of Natural
5 Resources who have a lot of experience in conducting
6 open houses is that it would probably be best to have,
7 as you suggest, the open house running the morning of
8 that hearing, but they also suggest it would be wise as
9 well to have something the previous evening, given that
10 in the locations we are talking about many people
11 prefer to come out in the evening rather than in the
12 morning.

13 So that the proposal would have been to
14 run the thing the afternoon and evening before, as well
15 as the morning of the hearing, to give access to people
16 who can't come during business hours. That is with
17 specific experience.

18 THE CHAIRMAN: What happens if we are
19 going to start this thing on a Monday, would you hold
20 it on a Sunday?

21 MS. MURPHY: Well, I think the point is
22 to hold it at some time in which people who have normal
23 business hours would have an opportunity.

24 THE CHAIRMAN: Mind you, we could start
25 the satellite hearing on the Tuesday.

1 MS. MURPHY: Correct.

2 THE CHAIRMAN: All right. I think the
3 Board doesn't have any major objections if you held it
4 the night before, for the reasons you are stating.

5 MS. MURPHY: And the next morning.

6 THE CHAIRMAN: And the next morning.

7 MS. MURPHY: Yes, that was the
8 suggestion.

9 THE CHAIRMAN: Okay. And we would
10 schedule the first satellite hearing for Dryden on the
11 Tuesday commencing at 2:00 p.m. in the afternoon.

12 Now, we will be giving and issuing
13 instructions for notice and the instructions will be
14 coming from the Board to the Ministry to effect the
15 notice under specified conditions.

16 We will also include within the notice --
17 or, sorry, the directions for notice, the provision
18 that a statement will be made in the notice that any
19 party who wishes reference to a specific exhibit
20 already exhibited in these proceedings shall notify the
21 Board by such and such a date.

22 Again, it's not the intention to have all
23 the exhibits present in Dryden, particularly the larger
24 ones, and we don't want to run into a problem that
25 somebody wants to refer to something and they are not

1 available. We think that if somebody wants to refer to
2 something specifically, they should notify the Board in
3 advance and then we will make sure it is on site.

4 Now, having said that, we expect the
5 major general exhibits to be there, a small number of
6 them, and these would include things like the
7 Environmental Assessment Document itself, Exhibit 4,
8 and perhaps we will have Mr. Mander confer with you as
9 to which ones would fall into that category so that
10 there will be some there.

11 MS. MURPHY: Yes. I think there are a
12 number of sort of procedural and practical matters that
13 we will have to deal with and I don't think it makes
14 much sense to deal with it at this point and before the
15 Board.

16 THE CHAIRMAN: Okay. Now, there is one
17 other matter though that we do want to allude to and,
18 that is - this is really a question for, Ms. Cronk -
19 with respect to your association and the individual
20 companies making up your association, if you recall,
21 although you are acting for the associations, there
22 were representations made at the outset that an
23 individual company may also wish to deal specifically
24 with certain matters on their own, presumably with
25 their own representation.

1 We do not expect the satellite hearings
2 to be that forum for individual companies which are
3 represented, because we are looking at this primarily
4 as a situation where members of the local public can
5 come and address the Board.

6 For instance, we feel that if one of the
7 member companies of your association wish to present
8 their own evidence, they would probably do so
9 subsequent to your case and, depending on whether they
10 were in support or in opposition, perhaps some other
11 place in the proceedings.

12 MS. CRONK: Mr. Chairman, I don't
13 anticipate that that is going to be a problem in any
14 respect. But having said that, you will appreciate
15 that depending upon the particular satellite location
16 it may be that there is some representation that may be
17 made to you by counsel on behalf of an individual
18 company of which I'm currently unaware.

19 That is not the same thing as seeking to
20 introduce evidence, and I have no indication at all
21 that there would be any intention on the part of any
22 company to do that, either in advance of our case or at
23 any of these satellite locations. And if our
24 information changes, I will inform the Board.

25 THE CHAIRMAN: Okay. And this may not

1 preclude, however, some independent companies who may
2 not be represented by counsel at one of these satellite
3 locations from utilizing the proceeding to raise
4 questions as well. There may be a number of
5 independent small companies out there that want to deal
6 with certain questions as we reach those locations.

7 MS. CRONK: That is in part what I meant,
8 Mr. Chairman. It may be that at one of those locations
9 either there will be representatives of such companies
10 in attendance, legal or otherwise.

11 THE CHAIRMAN: Right.

12 MS. CRONK: I can't speak to that, I
13 don't know.

14 THE CHAIRMAN: Okay. The same would
15 apply to some of the other groups that are formally
16 represented by an association such as NOTOA and the
17 OFAH and; that is to say, certainly members of those
18 organizations individually could address the Board, but
19 where they do have counsel presenting the bulk of the
20 evidence at another particular location, we don't wish
21 to get into a total repetition of that kind of thing.

22 MS. CRONK: I think the only caveat from
23 our perspective that I would add to that, Mr. Chairman,
24 is that at some of these locations if there are
25 individuals who are in the employ of or associated with

1 various companies active in the area, they may in no
2 way constitute persons who would be called as witnesses
3 in the formal presentation of the case.

4 I would not have thought it the Board's
5 intention to restrict the ability of people like that
6 to come forward and speak their views.

7 THE CHAIRMAN: No. It isn't the Board's
8 intention. What we are trying to prevent, if I might
9 put it in those terms, is most of the time being
10 occupied by a formal lengthy presentation which should
11 probably be presented in some other location as part of
12 the formal process.

13 We are really trying to make sure that
14 this provides an opportunity to the local public and
15 individuals of the local public to address the Board
16 when we reach their particular locale, that is the
17 intention of that caveat.

18 Other than that, we will issue those
19 instructions very shortly.

20 MS. CRONK: Mr. Chairman, just before
21 re-examination commences may I, through you, ask for
22 clarification of at least one aspect then of how the
23 satellite hearings are going to be conducted?

24 THE CHAIRMAN: Yes.

25 MS. CRONK: Do I understand that at the

1 formal session at which the Board will be in
2 attendance, at the outset then there will be
3 evidence-in-chief called by the MNR through particular
4 witnesses, those witnesses then being subject to
5 cross-examination followed by the receipt of public
6 submissions?

7 THE CHAIRMAN: No, that wasn't the
8 Board's intention. What the Board's intention, I think
9 was, is to basically have the witnesses from MNR
10 available in sort of a panel format and allow members
11 of the public who wish to address the Board to do one
12 of two things: To either make a submission to the
13 Board, and that might be by way of submitting a
14 document or reading a letter or making an oral
15 presentation to the Board, followed by other members of
16 the public who may wish to question the panel of
17 witnesses that are there.

18 We didn't intend particularly that that
19 session would be a presentation -- a formal
20 presentation by MNR of any of the evidence.

21 MS. CRONK: I had not understood that was
22 the purpose either, but I when reviewed the letter and
23 saw that there was reference being made to MNR
24 witnesses being called, the structure of it was a
25 little confusing to me.

1 So that before the Board then receives
2 public submissions at the formal session, those members
3 of the public in attendance will have the right, in the
4 first instance, prior to giving evidence themselves, to
5 ask questions of a panel of witnesses of the MNR?

6 THE CHAIRMAN: Or vice versa. In other
7 words, they may wish to make a formal presentation to
8 the Board. That is one of the purposes of the
9 satellite session, to be able to hear from members of
10 the public who can't otherwise attend Thunder Bay or
11 one of the other locations.

12 MS. CRONK: I understand, sir.

13 THE CHAIRMAN: Okay. But, secondly, we
14 want to have the MNR witnesses on hand to be able to
15 provide answers by way of information to questions
16 asked.

17 We don't feel that the Board is in a
18 position to answer those questions, we don't feel that
19 counsel should be answering those questions and that is
20 why we have asked for the provision of these sort of
21 generic witnesses covering these three broad areas.

22 MS. CRONK: My only point, sir, is those
23 questions and answers then will be under oath?

24 THE CHAIRMAN: Not normally.

25 MS. CRONK: That is what I was trying

1 to...

2 THE CHAIRMAN: No.

3 MS. CRONK: But it will be in the
4 presence of the Board?

5 THE CHAIRMAN: Yes. Oh, yes, the Board
6 will be there. We try to make that particular session
7 as informal as possible with members of the public.

8 MS. CRONK: Thank you, Mr. Chairman.

9 THE CHAIRMAN: And they would just answer
10 questions and it can be directed to any member on that
11 panel, and if the panel can provide an answer, so be
12 it.

13 Don't forget, one of these members of
14 this panel will be the local district manager of that
15 particular locale and so hopefully that person can
16 handle most of the questions of a local nature.

17 MS. CRONK: I would like to consider that
18 matter, Mr. Chairman, if there's anything further that
19 I wish to say, perhaps I could raise it at a later
20 date.

21 THE CHAIRMAN: Okay. And as far as other
22 counsel present for the other parties, it is possible
23 during the formal submission stage of any of these
24 members of the public when they read in a submission
25 that counsel may want to question them, that is

1 generally allowed, bearing in mind that we are not
2 looking for a go-for-the-throat type of
3 cross-examination.

4 MS. CRONK: You were looking over there.

5 THE CHAIRMAN: No, no. In other words,,
6 there can be some questions asked by other counsel in
7 terms of cross-examination, clarification questions, et
8 cetera. We are not are particularly wanting to subject
9 members of the public to a rigorous cross-examination,
10 particularly in view of the fact that most of them will
11 be unrepresented.

12 MR. LINDGREN: Mr. Chairman, one further
13 point of clarification. You have just indicated that
14 the MNR witnesses will not be sworn in.

15 I have just spoken with Ms. Murphy about
16 this particular issue. It was my understanding that
17 these witnesses would be sworn in.

18 THE CHAIRMAN: Oh now, just a moment. It
19 may be that the MNR witnesses might be sworn. You
20 know, we expect them to be witnesses of the proponent.
21 I don't see any problem with them being sworn. What we
22 are saying is, we are not going to necessarily swear in
23 all of the parties who wish to address the Board.

24 MR. LINDGREN: I have no problem with
25 that. I believe that the MNR witnesses should be sworn

1 in and should be on the record.

2 THE CHAIRMAN: Oh yes. Well, that will
3 definitely be on the record and we don't have any
4 difficulty with the MNR witnesses being sworn.

5 MS. CRONK: I don't want to complicate it
6 further this morning, Mr. Chairman, but I would like to
7 consider the implications of what has been said.

8 THE CHAIRMAN: Okay. Now, again, we are
9 trying to avoid, as much as possible, any major
10 evidentiary problems. Bear in mind that the Board
11 looks at these proceedings as being difficult for
12 ordinary members of the public to follow along, given
13 the fact they are located in Thunder Bay for the most
14 part and given the fact that they are lasting in excess
15 of probably two years.

16 As a consequence, I think all of the
17 parties are going to have to make whatever
18 accommodation they can, realizing that the Board will
19 be looking at any evidentiary problems that may appear
20 prima facie in a manner which will ultimately in the
21 long run not cause the parties a problem.

22 So you can sort of raise the formal
23 objections if you want at the appropriate time, but we
24 don't feel necessarily it will cause the parties
25 ultimately a large problem.

1 MS. SEABORN: Two short questions, Mr.
2 Chairman.

3 First of all, has the Board had any
4 indication from any of the parties on the part-time
5 list that they wish to call evidence in Dryden? And,
6 secondly, if any party does file a submission, whether
7 it's a letter or whatever, with the Board prior to
8 attending in Dryden, is that something that would be
9 circulated to the parties before the appearance in
10 Dryden?

11 THE CHAIRMAN: Well, I think the practice
12 will be that if a letter is in fact submitted to the
13 Board in advance of the proceedings that is intended to
14 be filed, the Board will endeavor to have it
15 circulated.

16 It may be that we can't physically
17 circulate it in advance, but in it will, in any event,
18 be available for parties at the proceeding, that is No.
19 1.

20 No. 2, we haven't had, I don't think at
21 this point in time, any indication of parties who wish
22 to make a presentation, but we do recall from the
23 preliminary hearings that some parties attended,
24 particularly when we held one of the preliminary
25 hearings in Dryden, and indicated some interest in

1 these proceedings. We presume that once the notice
2 goes out, they will want to attend and perhaps make a
3 formal presentation.

4 MS. SEABORN: Thank you.

5 THE CHAIRMAN: Anything else with respect
6 to this?

7 (no response)

8 Okay. We will issue the direction
9 shortly. Thank you.

10 MR. FREIDIN: Just one comment. My
11 understanding when I was in Dryden, I think there was
12 only one person I believe --

13 THE CHAIRMAN: It was the Mayor of Dryden
14 I believe indicated --

15 MR. FREIDIN: Mayor Jones. He wasn't the
16 mayor at the time, but he has been...

17 THE CHAIRMAN: We also think the
18 Northwest Chamber of Commerce might have had a
19 representative who appeared in Dryden as well.

20 MR. FREIDIN: Oh yeah, there were other
21 people who were Dryden. I guess -- maybe it was in
22 discussions that I had with those people, I got the
23 impression that most of them were wanting to present
24 their evidence in places other than Dryden, but we will
25 see. I don't want to complicate things either.

1 RE-DIRECT EXAMINATION BY MR. FREIDIN:

2 Q. Mr. Churcher and Mr. Galloway, could
3 you have in front of you Exhibit 56 which is the Forest
4 Resources of Ontario, 1986, and page 123 of the Panel
5 13 witness statement.

6 I don't believe Mr. Galloway needs the
7 Forest Resources of Ontario.

8 MR. FREIDIN: Mr. Chairman, I am a bit
9 slow here. I have left my Panel 13 statement up in my
10 office and somebody is going to fetch it back. I might
11 be able to do this without the notes I have written in
12 my copy.

13 MRS. KOVEN: What was the page number,
14 Mr. Freidin?

15 MR. FREIDIN: Page 123. It always
16 happens in the excitement of anticipating
17 re-examination.

18 THE CHAIRMAN: The Board doesn't think
19 you have been so quiet for so long.

20 MR. FREIDIN: Well, as you will see --

21 THE CHAIRMAN: In a very long time.

22 MR. FREIDIN: Well, as you will see
23 later, Mr. Chairman, I have no intentions of being
24 quiet.

25 Q. Now, Mr. Churcher, Mr. Castrilli

1 asked you some questions about the comparison between
2 certain figures found in the paper by Gross which
3 includes page 123 of the witness statement?

4 MR. CHURCHER: A. Yes.

5 Q. And other figures found in Exhibit 56
6 which is the Forest Resources of Ontario, 1986 and, in
7 particular, page 43 of that document that I will be
8 referring you to.

9 Now, if we could first go to the paper by
10 Mr. Gross, could you answer the following general
11 questions: Are all species of spruce equally
12 susceptible to mortality due to infestations of spruce
13 budworm?

14 A. No, they are not.

15 Q. Could you explain that?

16 A. Black spruce tends to be -- or is
17 less susceptible to mortality after feeding by spruce
18 budworm than white spruce.

19 Q. Okay. Now, if we look at the table
20 on page 123 of the witness statement, does that table
21 indicate the average loss in different species of
22 spruce?

23 A. Yes. The losses for spruce budworm
24 are broken down into losses with respect to black
25 spruce, and as well as white spruce, as well as balsam

1 fir.

2 Q. All right. And the numbers -- or the
3 losses for black spruce and white spruce then are the
4 first two numbers under the total or the column
5 entitled: Total?

6 A. Yes, that's correct.

7 Q. Okay. Now, if we can go to page 43
8 of Exhibit 56, Mr. Castrilli referred you to the part
9 of Table 6 which deals with spruce, which is the fourth
10 working group identified.

11 Does this table indicate the species
12 breakdown in Ontario -- sorry, we are looking at the
13 fourth column, horizontal column on Table 6. Does this
14 table indicate the species breakdown in Ontario between
15 white spruce and black spruce?

16 A. No, it just -- the fourth row refers
17 only to spruce.

18 Q. Okay. Mr. Galloway, given your
19 experience in the boreal forest, can you give a general
20 indication of the percentage of that total volume that
21 is white spruce?

22 MR. GALLOWAY: A. Yes, that would be
23 approximately 25 per cent.

24 Q. So, therefore, if we are looking at
25 the total figure on page 43 of approximately 2-billion

1 gross total volume, the gross amount of growing stock
2 of white spruce would roughly be 25 per cent of that
3 amount?

4 A. Yes.

5 Q. Now, Mr. Churcher, if we can go back
6 to page 123, the annual loss of white spruce between
7 1977 and 1981 I believe is indicated in that chart?

8 MR. CHURCHER: A. Yes, it is.

9 Q. And what is that figure?

10 A. The total figure is 1,690,000 cubic
11 metres.

12 Q. And that is an average for each year
13 between '77 and '81?

14 A. Yes, that's correct.

15 Q. So if we wanted to determine the loss
16 over a five-year period for white spruce, it would be a
17 matter of multiplying that particular amount by five?

18 A. Yes, that's correct.

19 Q. Could you advise me, Mr. Churcher,
20 which of the two species of spruce is of primary
21 concern in the spruce budworm program?

22 A. White spruce is the major species.

23 Q. For the reason that you indicated,
24 they are more susceptible?

25 A. That's correct.

1 Q. Could you comment generally on the
2 validity of comparing the average annual mortality
3 figures that we have in Exhibit 123 to the total
4 growing stock of spruce as reported in the Forest
5 Resources of Ontario?

6 A. Yes. I would feel that when we are
7 talking about general numbers of this nature,
8 provincial-wide numbers, that they are difficult to
9 compare the two, that you can draw incorrect
10 conclusions.

11 You have to look at the losses such as
12 expressed here on the impact what the budworm can do on
13 a species like white spruce on a very localized basis
14 or localized nature. Comparing the losses to the
15 provincial growing stock of white spruce may not be an
16 accurate comparison.

17 Q. Thank you. Again staying with you,
18 Mr. Churcher, when looking at the comparisons between
19 these figures that we are talking about, Mr. Castrilli
20 asked you a series of questions based on these gross
21 total numbers and asked you to agree that some people
22 would conclude that it is not necessary to spray.

23 Do you recall that line of questioning?

24 A. Yes, I do.

25 Q. Now, in putting the questions to you,

1 Mr. Castrilli based his question on the following
2 qualification - I think I have got it down fairly
3 accurate - he says: "Looking at it globally, but
4 without looking at the management unit, and then he
5 went on and asked you the question.

6 What is the significance, if any, of that
7 qualification? And what I am getting at is: Would
8 your answer be different to his question if you looked
9 at the management unit level as opposed to looking at
10 it globally?

11 A. Yes, it would.

12 Q. And how would it be different, or how
13 is that significant?

14 A. Well, as I indicated, I feel that
15 when you look at it at the management unit level that
16 the implications or the impacts that the budworm would
17 have on the white spruce at that unit level may very
18 well indicate that a spruce budworm spray program or
19 some form of intervention of managing the spruce
20 budworm would be warranted.

21 Q. And, Mr. Galloway, having been --
22 having worked at the management unit level and being in
23 the field is the qualification; that is, leaving aside
24 considerations of a management unit, is that a
25 qualification which is significant to you when one is

1 considering the answer?

2 MR. GALLOWAY: A. Yes. The impact at
3 the management unit level could in fact mean the lack
4 of wood supply for a specific industry in that area and
5 it would have major effects at a management unit level
6 and a local community level but would not show as an
7 effect on the global provincial numbers.

8 Q. Thank you. Mr. Churcher, back to
9 you. Mr. Castrilli asked you whether letting nature
10 run its course is an option with budworm and you
11 responded: "Definitely." Do you recall that?

12 MR. CHURCHER: A. Yes, I do.

13 Q. Now, in answer to a question from the
14 Chairman you indicated that the actual area of
15 infestation treated has been roughly two per cent or
16 you may have said between one and two per cent; is that
17 correct?

18 A. Yes, it varies from year to year, but
19 as a general rule, two per cent -- one or two per cent
20 would be a fair figure.

21 Q. Okay. Given that, can you comment on
22 whether letting nature take its course is an option
23 that is actually chosen for part of the area of
24 infestation?

25 A. Yes, using those figures I would --

1 that would indicate that letting nature take its course
2 is the Ministry's option over roughly 98 per cent of
3 the infestation.

4 Q. And on that two per cent of the area
5 that is treated, what evidence is there about how that
6 area is chosen? How do you choose what two per cent is
7 going to get sprayed?

8 A. I believe in my written evidence
9 there are nine criteria listed as -- to explain when an
10 area may be selected for treatment.

11 Q. And where do we find those nine -- I
12 think it starts at page 96?

13 A. Yes, that would just -- 96 to
14 approximately 100 or 101 -- page 100.

15 Q. And I don't think we need to review
16 those, Mr. Churcher. Can you advise me: Is the
17 procedure for the aerial application of insecticides --
18 does that have any evidence which identifies how that
19 two per cent gets identified?

20 A. Yes, in the procedure for the aerial
21 application of insecticides for forest management there
22 are a number of -- or two classes of forests that would
23 qualify to be aurally treated with insecticides, and
24 those being, as we have discussed before, the
25 commercially operable forests and the high value

1 forests and --

2 Q. Now, the commercial -- sorry.

3 A. And it provides a number of details
4 as to what would then qualify for those two classes.

5 Q. All right. And just for the record,
6 are those two categories of commercially operable
7 forests and high value forests contained in the
8 procedure at pages 150 through to 152?

9 A. Yes, that's correct.

10 Q. And if we look at the high value
11 forests which are described on page 151, are there
12 three categories of high value forests?

13 A. Yes, there are.

14 Q. And, again, they are described under
15 the headings Category 1, 2 and 3?

16 A. That's correct.

17 Q. Okay. Would you take out your copy
18 of Exhibit 669, Mr. Churcher, which is the paper by Mr.
19 Gordon.

20 MR. FREIDIN: It looks like this Mr.
21 Martel (indicating). We have got an extra copy. I am
22 not sure whether you are going to need the copy
23 specifically.

24 MR. CHURCHER: I have an extra copy here,
25 Mr. Freidin, if that will help.

1 MR. FREIDIN: Sure. If you would perhaps
2 provide that to Mr. Martel.

3 MR. CHURCHER: (handed)

4 MR. MARTEL: Thank you.

5 MR. FREIDIN: It's nice to see someone
6 else gets lost in the paper war from time to time, Mr.
7 Martel.

8 MR. GALLOWAY: It's a management problem.

9 MR. FREIDIN: Q. Mr. Churcher, in
10 relation to the Gordon paper, before filing this
11 exhibit Mr. Castrilli asked you whether stands
12 vulnerable to budworm could be allowed to be defoliated
13 to raise the spruce component of the stand and you
14 disagreed. Do you recall that?

15 MR. CHURCHER: A. Yes.

16 Q. Now, Mr. Castrilli took you to this
17 paper and he quoted a section - I'm sorry, I just
18 haven't got the page number - on page 23, and it was
19 the first four lines in the first full paragraph which
20 read:

21 "If the present overstorey, including the
22 rising secondary stand wave were now
23 wiped out, the stand would have a much
24 more favourable composition of spruce
25 relative to fir."

1 A. Yes.

2 Q. Now, Mr. Churcher, I have read the
3 paper and it is somewhat confusing. It wasn't dealt
4 with in total by Mr. Castrilli and I am wondering
5 whether you could just explain briefly what Mr.
6 Gordon's hypothesis is and include in that what he
7 means by secondary stand wave?

8 A. Well, my understanding of the paper
9 indicates that there was a stand there that was
10 subjected to spruce budworm infestation.

11 Q. And what kind of stand was that?

12 A. It was a balsam fir/white spruce
13 stand.

14 Q. Thank you.

15 A. Much of the balsam fir would have
16 been killed -- the dominant balsam fir in the stand
17 would have killed by the budworm, to a lesser extent
18 the white spruce. The secondary stand wave, as I
19 understand it, he is talking about here, is the
20 regeneration that is moving up, that is coming up
21 through the stand.

22 Q. Is understorey a term which could
23 properly describe that?

24 A. Yes, that would be a fair term.

25 Q. And does the document indicate which

1 species the understorey consisted of?

2 A. Again, it would be predominantly
3 balsam fir with some white spruce. The original --
4 again, as I understand the paper, initially the ratio
5 of balsam fir to white spruce would be 7:1, there would
6 be seven times as much balsam fir than there would be
7 white spruce.

8 Now, this paragraph that Mr. Freidin just
9 quoted begins:

10 "If the present overstorey..."
11 including what is now this understorey was wiped out by
12 subsequent budworm infestation, then, again, a lot of
13 the balsam fir would be killed off leaving more white
14 spruce, and the words:

15 "...the stand would have a much more
16 favourable composition of spruce relative
17 to fir..."

18 The 'more favourable' is just an indication that
19 instead of having a 7:1 ratio of fir to spruce, we
20 would now have a 2:1 ratio of fir to spruce.

21 There would still be twice as much fir as
22 spruce. And I believe the figures he provides based on
23 this one stand that he looked at, there would be
24 roughly 2,500 stems per hectare of fir and 1,250 stems
25 per hectare of white spruce.

1 MRS. KOVEN: By wiped out, does he mean
2 by budworm infestation, or cutting, or any means?

3 MR. CHURCHER: I believe he is implying
4 budworm; however it could equally be applicable to fire
5 or some other natural harvest method like that.
6 Whether or not harvesting by man would be included in
7 that, I am not sure.

8 MRS. KOVEN: Well, I thought it was just
9 for budworm, because if it were harvested then the
10 balsam fir and white spruce would again be unequal?

11 MR. CHURCHER: Yes, that would be a
12 reasonable conclusion.

13 MR. FREIDIN: Q. Mr. Churcher, you said
14 that the secondary wave or the understory would be
15 eaten by a subsequent budworm attack, and does the
16 paper explain when that second budworm attack would
17 occur so that you would have the wiping out as referred
18 to?

19 MR. CHURCHER: A. Not as I read the
20 paper, no. There is no implication of when that would
21 occur.

22 Q. And do you know or can you indicate:
23 If you have a budworm epidemic in a particular stand,
24 can you indicate when the next epidemic or the
25 subsequent budworm attack is likely to be in that

1 specific stand?

2 A. I believe in the graphs that I
3 presented in my written evidence and in response to a
4 cross-examination question from Ms. Cronk, I believe I
5 indicated that roughly we are talking about a 30 to
6 40-year period between outbreaks in any given stand.

7 Q. So that whether that second outbreak
8 actually comes back and eats that stand in 30 or 40
9 years is a hypothetical, for starters?

10 A. Yes. There could be other factors
11 that may have occurred in that 30 to 40-year period
12 which may not have made the stand as susceptible to a
13 subsequent budworm outbreak.

14 Q. Now, Mr. Churcher, if you wanted to
15 test whether Mr. Gordon's hypothesis worked in the
16 field, in the real world, how long would it take?

17 A. Well, given that 30, 40-year time
18 frame you were just discussing, it would take at least
19 that long. We would have to find a stand now that fits
20 this description where a lot of the balsam fir was
21 wiped out by the current epidemic and then watch what
22 happened as that stand regenerated until the next
23 outbreak occurred in that stand 30 to 40 years or more
24 in the future.

25 Q. Okay. Now, would it be worth finding

1 out whether the hypothesis is correct?

2 A. Yes, definitely.

3 Q. And, in your view, could we afford to
4 experiment to determine whether the hypothesis is
5 correct by leaving all of the area that we are talking
6 about unsprayed, including the two per cent -- the one
7 or two per cent that you spray on an annual basis?

8 A. No, I don't think that would be a
9 wise management decision.

10 Q. Why not?

11 A. Well, conducting an experiment on
12 that grandiose scale would not allow the foresters or
13 the managers to meet the objective that they were
14 attempting to carry out.

15 It might be wise to conduct those
16 long-term experiments on select areas across the area
17 of the undertaking so you can learn from that, and when
18 the next epidemic arrives you would have learned
19 something and gained some knowledge, but treating the
20 entire area as a grandiose experiment would not be
21 appropriate.

22 Q. And the objective that you referred
23 to would be what?

24 A. The objective of timber management.

25 Q. Thank you. I think I am finished

1 with you for a few moments, in any event, Mr. Churcher.

2 I would like to turn to Mr. Hynard. Mr.
3 Castrilli -- and perhaps you may want to refer to
4 Exhibit 670, Mr. Hynard. In case you do, perhaps you
5 could just have that document in front of you.

6 Now, Mr. Castrilli --

7 MR. FREIDIN: Sorry. It looks like that,
8 a two-pager (indicating). It is the document: Recent
9 Advances in Spruce Budworm Research.

10 Q. Mr. Hynard, Mr. Castrilli asked you a
11 series of questions, both of you and Mr. Churcher
12 actually, relating to the use of modified harvest
13 techniques to control budworm.

14 Now, by modified harvest techniques he
15 was referring to strip cuts, block cuts, shelterwood
16 cuts. Was that your understanding during that
17 questioning?

18 MR. HYNARD: A. Yes, it is.

19 Q. Now, in Exhibit 670, am I correct
20 that the discussion is about shelterwood cutting?

21 A. Yes, it is.

22 Q. And I believe you pointed out that
23 the species being discussed in this exhibit was red
24 spruce; is that correct?

25 A. Yes, I note that on the second page,

1 caption to Figure 1.

2 Q. Now, in answering Mr. Castrilli you
3 started to describe the problems associated with
4 modified cuts in white and black spruce.

5 And my question for you is: Would you
6 use strip cuts, block cuts or shelterwood cuts to
7 control spruce budworm if it was inconsistent with the
8 silvics of the species?

9 A. Well, absolutely not. It would make
10 no sense at all to carry out a silvicultural harvest
11 system that was incompatible with the silvics of the
12 species. That would do nothing to work towards budworm
13 control.

14 Q. And what spruce species are we
15 talking about when we talk about spruce in Ontario?

16 A. We are talking about white spruce and
17 black spruce.

18 Q. And modified harvesting can occur in
19 certain areas in relation to those species?

20 A. Yes, it can. There was considerable
21 evidence given in Panel 10 on exactly that, especially
22 with regard to black spruce.

23 Q. I understand that you gave evidence
24 in Panel 10 regarding the limits or the limitations in
25 terms of the areas on which you could actually engage

1 in that activity?

2 A. Yes, yes. They could only be
3 feasibly practised on appropriate sites where the
4 conditions were suitable for that kind of silvicultural
5 harvest system and natural regeneration method.

6 Q. Thank you. Now, if we look at the
7 rest of the paper and if we look at the first full
8 page -- if we look at the left-hand column, the last
9 line of the left-hand column, right in the middle of
10 the page it reads:

11 "These stands can be cultured into new
12 stands containing a higher percentage of
13 the more desirable spruce."

14 A. Yes, I see that.

15 Q. Could you explain how that could
16 happen after a shelterwood cut?

17 A. Yes. And, again, we are talking
18 about red spruce here.

19 Q. Yes.

20 A. And I should point out that red
21 spruce is not a species of any importance in Ontario.
22 It does occur in a few isolated little pockets in
23 Minden District and parts of Bancroft and Algonquin
24 Park also, but it represents no volume or area of any
25 significance at all.

1 The research in Maine that he refers to
2 suggests that the spruce stands can have their spruce
3 content raised in the second stand by using the
4 shelterwood method, and he states that stands with as
5 little as 11 per cent spruce content can be so treated.

6 If there were advanced reproduction on
7 the forest floor at the time of harvest and if the
8 shelterwood conditions provided a competitive edge to
9 that advanced reproduction over other tree species
10 which would also regenerate naturally, then the spruce
11 content could conceivably be raised.

12 In the case of red spruce, it is a very
13 shade tolerant tree, far more shade tolerant than white
14 spruce and certainly more tolerant than black spruce,
15 too. In fact, it is more tolerant than balsam fir. We
16 are not talking about the same creature at all as
17 either white spruce or black spruce.

18 It does produce advanced reproduction on
19 the forest floor; that is, it can germinate and
20 establish without seedbed preparation on certain sites.
21 And so if there were a red spruce advanced reproduction
22 on the forest floor, then shelterwood cutting could
23 favour the spruce over other naturally regenerating
24 trees because it is more tolerant and is present at the
25 time of the initial harvest.

1 So for that reason, shelterwood cutting
2 could, under those circumstances, create new stands
3 containing a higher percentage of the more desirable
4 spruce.

5 Q. And could you advise me: If you
6 engage in that shelterwood cutting for the purposes of
7 raising the content of the red spruce in those
8 particular stands, could that activity be described as
9 stand conversion?

10 A. Well, it could be. Certainly the
11 original stand contained only 11 per cent spruce, so it
12 was definitely not a spruce working group at the time
13 of harvest.

14 If they raised the content, if the
15 percentage they obtained was such that the spruce was
16 now the predominating species, that new stand could be
17 a spruce working group, in which case we are looking at
18 stand conversion.

19 Q. Thank you. I direct you to the same
20 exhibit, the same page but to the right-hand side of
21 the page, starting about seven or eight lines up in the
22 middle of the column it says:

23 "Potential crop trees..."

24 Do you have that location?

25 A. Yes, I do.

1 Q. And the document reads:

2 "Potential crop trees of desirable
3 species, vigor and form should be
4 selected and adequate growing space
5 provided by removing unwanted and
6 competing trees."

7 Now, is that kind of activity sometimes
8 referred to as tending?

9 A. Yes. Yes, it is.

10 Q. Now, if you were going to carry out
11 this treatment over a large area, what methods would
12 you use and what limits would there be?

13 A. Let me read the previous two
14 sentences so I understand the context in which he is
15 prescribing this.

16 He's referring to tending treatments that
17 would be conducted 5 to 10 years after the regeneration
18 was established.

19 So we are talking about what we have
20 referred to in our evidence as a cleaning treatment and
21 that cleaning treatment would be conducted -- well, I
22 don't know the technique that would be used in this
23 particular case, it would depend entirely on the
24 species involved and the situation as to what that
25 technique might be.

1 Q. Okay, I think that's fine. I would
2 like to go to you, Ms. Krishka. A few questions about
3 the Hubbard Brook experiment. You may -- I'm sorry, I
4 don't think you will need any exhibits. If you do, of
5 course, feel free to refer to them.

6 You agreed during cross-examination that
7 under extreme conditions timber management activities,
8 including the use of herbicides could alter nutrient
9 and hydrologic cycles. And my question for you is:
10 Could natural disturbance have a similar effect?

11 MS. KRISHKA: A. Definitely that could
12 happen and I believe that Mr. Armson described such an
13 instance in Panel 9 when he was talking about wild
14 fire.

15 Q. Thank you. Again in relation to the
16 Hubbard Brook experiment, you indicated that in terms
17 of the activities in Watershed No. 2 and, particularly
18 the use of herbicides to facilitate that part of the
19 experiment which took place in Watershed No. 2, the
20 activities were not similar to timber management
21 operations in the area of the undertaking.

22 Do you recall giving that evidence?

23 A. Yes, I do.

24 Q. Can you help us, Ms. Krishka, as to:
25 How do the forests and the site conditions in Watershed

1 No. 2 and, in fact, in the entire Hubbard Brook
2 experimental area compare to the area of the
3 undertaking?

4 A. Well, they are very different. The
5 study was done in Oregon and it was on a watershed.
6 The area had a 29 per cent slope and the cutting
7 practices went right down to the water's edge.

8 The conditions were different; they were
9 quite coarse soils, sandy loams and coarse-textured
10 soil overlying bedrock.

11 THE CHAIRMAN: Excuse me, Mr. Freidin or,
12 s. Krishka. Is not the Hubbard Brook area in New
13 Hampshire?

14 MS. KRISHKA: I'm sorry.

15 THE CHAIRMAN: New Hampshire?

16 MS. KRISHKA: Oh, I'm sorry, you're
17 right. It's New Hampshire. I was thinking of a
18 different study.

19 MR. FREIDIN: Q. The evidence you gave,
20 however, is it information which is in fact accurate in
21 relation to the Hubbard Brook experiment in New
22 Hampshire?

23 MS. KRISHKA: A. Yes. I apologize for
24 that.

25 Q. Okay. So you mentioned slope and you

1 mentioned soils. Was there an indication in or can you
2 indicate what type of forest it was?

3 A. It was a hardwood forest.

4 Q. And in some of the experimental areas
5 I understand the document indicates that there were
6 clearcuts of hardwood forests?

7 A. Yes, and that is quite different than
8 the evidence we have heard earlier in terms of normal
9 practices in hardwood forests.

10 Q. And when you described the soils,
11 were you indicating that they were in some way
12 different from the soils in the area of the
13 undertaking?

14 A. They are somewhat different. We do
15 have some coarse-textured soils in the area of the
16 undertaking, but this particular area was -- there were
17 areas that were quite shallow with underlying bedrock.
18 We have areas such as that in the area of the
19 undertaking, but not necessarily where we would conduct
20 practices that resembled this study at all.

21 Q. Thank you very much.

22 Mr. Hynard, back to you. Now, you have
23 indicated actually today, but you indicated in your
24 evidence during cross-examination that tending,
25 including chemical release, is part of a silvicultural

1 package?

2 MR. HYNARD: A. (nodding affirmatively)

3 Q. And if herbicide became unavailable
4 you would have to adjust the total silvicultural
5 package. And could you explain what you meant by that?

6 A. Oh, yes. You will recall from
7 earlier evidence that the alternative, alternative
8 tending technique to chemical is manual but that manual
9 cleaning methods, especially with aspen, are less
10 effective; they are less effective, they require
11 retreatment in many cases and they are not effective at
12 all against grasses and other herbaceous growth.

13 Therefore, if tending by chemical means
14 was not available, then those planted trees, assuming a
15 plantation in this case, would require a very -- a fast
16 start, they would need very heavy site preparation in
17 order to give them freedom from competition for a
18 longer period than they might otherwise have using our
19 current site preparation techniques.

20 In other words, to be effective, manual
21 cleaning methods must be dealing with relatively large,
22 relatively competitive young trees competing with a
23 hardwood species that are not so numerous or so
24 advanced over the conifer that it's a hopeless
25 situation of hacking them down endlessly.

1 So, in other words, it would require a
2 package that carried with it a much more heavy site
3 preparation technique to get those trees going. It
4 might also eliminate, in many cases, natural
5 regeneration methods for the simple reason that
6 naturals are slow starters.

7 So that if it was a silvicultural package
8 that included natural regeneration with tending, that
9 option may be eliminated, it may be necessary to return
10 to artificial to again get a faster starting more
11 competitive tree.

12 Now, in some situations that may be
13 possible. It may be possible to do very heavy
14 mechanical site preparation, for example, for jack
15 pine. Jack pine and white pine, they tolerate that
16 sort of thing well and it gives them a competitive
17 edge; whereas with white spruce, that package may not
18 be viable at all going the very heavy mechanical site
19 preparation route.

20 Q. There was a discussion - I'm still
21 sticking with the use of herbicides and the possible
22 loss of the use of herbicides - there was a discussion
23 about the clause in the FMA agreements or the FMAs
24 regarding the effect on the obligation of the Ministry
25 and the company if herbicides were not available for

1 us.

2 Mr. Galloway stated that if herbicide was
3 not available, you would have to reconsider the entire
4 silvicultural package - evidence very similar to
5 yours - and he added, including the crop that you are
6 trying to grow. Do you agree with that evidence?

7 A. Yes, I certainly do.

8 Q. Are there any factors, Mr. Hynard,
9 which could affect either the ability to adjust the
10 species of crop trees or the practicality of doing so?

11 A. The factors that -- sorry, could you
12 repeat that again, please?

13 Q. Are there any factors which could
14 affect either the ability to adjust the species of crop
15 trees or the practicality of doing so?

16 A. Well, yes, absolutely. Again, we are
17 talking there about the choice of crop tree and the
18 factors that might limit that choice, and I have in my
19 mind a very productive site, well suited to the
20 production of spruce but in which case, if chemical
21 methods were unavailable and heavy mechanical site
22 preparation techniques unsuitable, those factors of
23 basic silvics coupled with practicality would require
24 that it would eliminate spruce as an option on that
25 particular site.

1 It may force natural regeneration methods
2 to aspen on that site or very, very heavy mechanical
3 techniques for jack pine. It might eliminate the
4 crop -- a species of choice on that particular site, a
5 species well adapted and well suited to that site and
6 in demand by industry but no longer practical to place
7 back on that site.

8 Q. Could the markets have any effect on
9 the practicality of changing crop trees?

10 A. Well, yes. Yes, absolutely.

11 Q. Thank you. Mr. Galloway, there was a
12 discussion regarding native community concerns for
13 possible effects of herbicide or insecticide on water
14 supply.

15 MR. GALLOWAY: A. Yes.

16 Q. In that discussion you used an
17 example of an area south of Lake Abitibi where potable
18 water supply was identified by the Band and you also
19 indicated that the supply was reviewed and it was
20 determined that it was not within the proposed spray
21 area. Do you recall that?

22 A. Yes.

23 Q. You also went on and you made this
24 following comment, you said:

25 "From then on, it would be identified as

1 a value."

2 A. Yes.

3 Q. What did you mean by that?

4 A. That because it had been identified
5 it would then show up on the values map for the timber
6 management planning process on the sort of permanent
7 record for that management unit.

8 Q. Mr. Hynard, in reviewing the data
9 regarding -- perhaps you should get out Exhibit 657
10 before we start.

11 MR. FREIDIN: 657 is an interrogatory
12 from Forests for Tomorrow. It's No. 14 for Panel No.
13 13 -- pardon me, Panel No. 12.

14 MR. HYNARD: I have it.

15 MR. FREIDIN: Do you have an extra copy
16 of that, 657?

17 MR. GALLOWAY: You can take this.

18 MR. FREIDIN: We have an extra copy,
19 here.

20 THE CHAIRMAN: I have got it.

21 MR. FREIDIN: Q. Now, in reviewing the
22 data regarding harvest levels of spruce, jack pine, and
23 poplar between 1981 and 1987 set out in that exhibit,
24 Mr. Hynard, you agreed that the most dramatic increase
25 in volume harvested has been in poplar over that period

1 of time. You also indicated that spruce and jack pine
2 data showed little change in volume harvested over that
3 time.

4 Now, you said there was -- you began to
5 say -- you said there was a reason for that, but you
6 weren't allowed to continue your response.

7 And what were you attempting to say?
8 There was a reason for what?

9 MR HYNARD: A. Well, there was a reason
10 that the consumption of jack pine and spruce had not
11 increased over that period of time in the same way that
12 poplar had. And I'm presuming that the reason for that
13 flat line in consumption of spruce and jack pine has
14 been supply.

15 That is, it's limited by the maximum
16 allowable depletion or, more particularly, the areas of
17 commercially operable forest within that MAD that is
18 available to the companies.

19 Q. Okay. Now looking at the numbers on
20 the table for poplar, is the harvest of poplar still
21 increasing at the same rate as it was increasing in the
22 early 1980s, based on these numbers?

23 A. No, no. It's levelled off quite a
24 bit in the past several years.

25 Q. Does that surprise you, Mr. Hynard?

1 A. No, it doesn't surprise me at all.

2 There was considerable gains in poplar consumption
3 based on new waferboard plants, particularly during the
4 70s and early 80s, a great amount of growth at that
5 time, and that market now seems saturated.

6 In other words, everyone who was going to
7 put waferboard sheathing on their new home has done so
8 and that growth has definitely dropped off in that
9 area.

10 Some growth does continue in the use of
11 poplar in hardwood kraft pulp, and I expect that the
12 recent gains are in that area.

13 Q. Thank you.

14 A. Much less in quantity though.

15 Q. Thank you. Staying with you, Mr.
16 Hynard, my next question actually arises from a
17 question asked by Mrs. Koven.

18 Just before she asked you the question,
19 you had told Mr. Castrilli that expected yields at
20 rotation was relevant when you were making
21 silvicultural decisions, but it is not necessary to be
22 able to quantify it.

23 Now, after you made that statement, Mrs.
24 Koven then asked - and I hope I got you down fairly
25 accurately here - was that:

1 "Would it be a different situation or
2 wouldn't you be in a different situation
3 if you were looking at the expected yield
4 of a plantation as opposed to a
5 non-plantation. In plantations.."

6 She indicated:

7 "...you have more control over planting
8 and tending and rotation is lower."

9 And then she made the comment:

10 "The first harvest is 30 to 40 years."

11 Now, you responded:

12 "Not in Ontario in 30 to 40 years."

13 What did you mean by that?

14 A. Oh, I meant that we certainly do not
15 foresee rotation ages, even in intensively managed
16 stands, being lowered to anywhere near that level of 30
17 to 40 years.

18 MR. MARTEL: Now, would you thin
19 commercially, let's say red pine or so on, at the end
20 of 30 or 40 years?

21 MR. HYNARD: Yes, certainly thinnings are
22 possible at the age of 30 to 40 years and thinnings
23 along the lines of those slides I showed in the red
24 pine plantation and certainly in Minden we begin
25 thinning at about age 25 or so, and we were thinning it

1 approximately every -- well, certainly every 10 years
2 thereafter.

3 But those are thinnings, those aren't
4 full rotation age and harvest cuts.

5 MR. FREIDIN: And, Mrs. Koven, when I
6 asked that question I wasn't sure -- well, I wasn't
7 sure whether you were referring to that type of
8 operation, the thinning operation, or whether you were
9 talking about rotation -- full rotation, and I would
10 just ask you if there is still something that is
11 unclear about that matter, perhaps you can ask Mr.
12 Hynard.

13 MRS. KOVEN: Well, if it's commercial
14 thinning that you are talking about?

15 MR. HYNARD: Yes. Yes, there is a
16 difference of course between thinnings and final
17 harvest. Thinnings are tending treatments in which you
18 are removing some trees to give the trees that remain
19 in the stand better growing conditions.

20 And in a young stand you may thin it once
21 or you may thin it repeatedly, depending on the type of
22 stand and the products that you are growing and so on.

23 The final harvest is at that time at
24 which you harvest the stand and replace it and start
25 all over again. So there is quite a difference between

1 thinnings and rotation age harvests.

2 MRS. KOVEN: In terms of commercial use
3 of the wood though, commercial thinning is very
4 attractive to industry?

5 MR. HYNARD: Well, if they were able to
6 do so profitably, absolutely, because it increases the
7 yield over time, you are gaining all those trees that
8 would otherwise be lost to mortality as the stand thins
9 itself.

10 So you are gaining extra wood, and you
11 are gaining that extra wood in areas potentially closer
12 to your mill and near a road system. The area was
13 established at one time and there is a road system
14 nearby or one that would be restored.

15 However, there is the realities of the
16 economics too, and when you deal with relatively low
17 yields from thinnings, after all you are not getting
18 all the timber in the stand, it's a relatively young
19 stand, and you are only removing some of the trees,
20 perhaps anywhere from a quarter to a half of the trees.
21 And, in that situation, your yield is low and your
22 products are very small, so you have got a high
23 handling cost.

24 MRS. KOVEN: The yield might be
25 acceptable though?

1 MR. HYNARD: Oh, yes, it may be and
2 whether it is, wherever those operations are
3 profitable, then I would expect them to be occurring.

4 MRS. KOVEN: And also you don't have the
5 cost and the investment of regenerating it though?

6 MR. HYNARD: Well, that's another
7 important factor too, yes. But given that the low
8 yields, the small size, the high logging costs of
9 thinning in this fashion, and the low value of the
10 products, there are very few situations in which
11 commercial thinning is profitable today.

12 Now, that may change.

13 MRS. KOVEN: Well, obviously, I don't
14 think it applies to the pulp and paper industry, but to
15 saw logs and that sort of industrial use, I think it's
16 a difference situation?

17 MR. HYNARD: Yes, that's true, much more
18 so for saw logs, although the thinnings themselves may
19 be pulpwood, the thinnings that come out.

20 MR. FREIDIN: Q. Can you advise: Are
21 commercial thinnings more predominantly -- do they take
22 place more frequently in natural stands or in
23 plantations?

24 MR. HYNARD: A. Within the area of the
25 undertaking?

1 Q. Yes.

2 A. Well, there are three situations
3 essentially in which commercial thinnings occur within
4 the area of the undertaking.

5 The one is red pine plantations towards
6 the south end of the area of the undertaking, like
7 around Minden, and there are commercial thinnings in
8 red pine done in the Kirkwood Unit, there is some going
9 on now in Parry Sound District, so in that area where
10 there is a pulpwood market for red pine and where there
11 are young plantations ready for thinning, that is the
12 one area.

13 The second major area is in maple, young
14 even-aged second growth maple stands along the lines of
15 the photograph that I showed and the biscuit that I
16 provided you. That kind of situation in which natural
17 maple stands, probably of clearcut or of fire origin,
18 are being thinned to increase saw log production and
19 the thinnings are being removed and sold commercially
20 as fuelwood. That kind of thinning is very common in
21 the Algonquin Region.

22 The third type of thinning described in
23 the statement of evidence is in middle-aged white/red
24 pine natural stands in which thinnings are occurring to
25 remove saw logs and favour the residual stands.

1 Now, to give you a percentage of which is
2 greater, I'm not sure, I would say natural stands. But
3 actually plantation management is more suitable
4 generally to commercial thinnings, it's just that there
5 aren't very many at that age at that time within the
6 area of the undertaking.

7 Q. That's fine, thank you very much, Mr.
8 Hynard.

9 MR. FREIDIN: Did you have any thoughts
10 as to whether you wanted to have a break before -- I
11 think I'm going to be another half hour anyway -- yes,
12 about that.

13 THE CHAIRMAN: All right. Why don't we
14 just continue through and finish off.

15 MR. FREIDIN: Okay

16 Q. Ms. Krishka, questions arising from
17 Exhibit 628 and 629. They were two papers, the one
18 dealing with three plantations near Manitouwadge, the
19 other one dealing with the stand near Atikokan. Okay.
20 Now, do you have them?

21 MS. KRISHKA: A. Yes.

22 Q. You were asked a number of
23 questions --

24 MR. FREIDIN: It may not be necessary to
25 have that actual exhibit in front of you, Mr. Martel.

1 Q. You were asked a number of questions
2 about Exhibit 628 which is the study regarding spruce,
3 the three plantations near Manitouwadge.

4 Mr. Castrilli asked you a number of times
5 where in Exhibit 628 you indicated the effect 2,4-D had
6 on survival of seedlings planted.

7 How old were the stands that you treated
8 at the time of the treatment?

9 MS. KRISHKA: A. Well, each plantation
10 was a different age and it's listed on page 4, Tab 1.

11 Q. All right. And what were the years
12 or the ages of the stands?

13 A. One was 7 years, the other was 11
14 years and the other was 13.

15 Q. Would you describe those trees as
16 tree seedlings?

17 A. Yes.

18 Q. Mr. Castrilli, in relation to Exhibit
19 629 which is the jack pine stand near Atikokan, asked
20 you: Where the size is the survival data, and you
21 responded we weren't looking for that information.

22 A. Yes.

23 Q. Could you explain that?

24 A. Well, we were -- in working in the
25 stand it was clear that it was a jack pine stand, that

1 was highly stocked and it was apparent, as we were not
2 surprised it was apparent, that survival or stocking
3 wouldn't be a concern, stocking -- or survival rather
4 wouldn't be a concern in that stand.

5 We did check to see if the stocking
6 levels were -- the density, rather, was comparable.

7 Q. Thank you. Mr. Galloway, could you
8 indicate when in the life of a plantation survival
9 assessments are done?

10 MR. GALLOWAY: A. Yes. Normally that
11 would be done either at the end of the first growing
12 season or the second growing season.

13 Q. Mr. Hynard, during Mr. Castrilli's
14 cross-examination of Ms. Krishka about where you could
15 find this survival data in the two reports that we just
16 discussed, you interjected and stated that the
17 Provincial Auditor's report deals with the survival,
18 but once again - and perhaps unfortunately - you were
19 not allowed to continue.

20 And my question is: Where does the
21 Auditor's Report deal with the topic of survival and
22 what is the point that you wanted to make?

23 MR. CASTRILLI: Mr. Chairman, as I
24 recall, cross-examination or re-examination is limited
25 to what occurs during cross-examination.

1 At the time of the discussion I had with
2 Mr. Hynard, we were discussing Exhibit 628 and whatever
3 the Provincial Auditor may have to say about issues in
4 general he has nothing at all to say in relation to
5 Exhibit 628.

6 I objected to Mr. Hynard making the
7 reference then and I object now.

8 THE CHAIRMAN: Well, Mr. Castrilli, I
9 think under the circumstances Mr. Hynard was going to
10 embellish the answer given by one of the other
11 witnesses and the indication, as I recall the exchange,
12 was: You don't want him answering it at that point, it
13 can be dealt with in re-examination.

14 This is re-examination.

15 MR. FREIDIN: Q. So, Mr. Hynard, could
16 you answer that question?

17 MR HYNARD: A. Yes. The subject that we
18 were talking about at that time was the correlation
19 between survival and success of newly regenerating
20 stands and tending, that was the subject that was
21 raised.

22 And the reference to the Provincial
23 Auditor's Report is contained on page 11 of that
24 report, which is Exhibit 28. In the sixth paragraph,
25 in that paragraph the Provincial Auditor made two

1 notes. The second one reads:

2 "In addition, there was a correlation
3 between those regions which did the most
4 tending as compared to their plans and
5 the percentage of satisfactorily
6 regenerated areas in those regions."

7 Q. Mr. Galloway, Mr. Castrilli
8 questioned you regarding Exhibit 677, that is the
9 Eleven-Year Summary for Silvicultural Statistics for
10 Canada and I think you should have that in front of you
11 to deal with my question.

12 MR. GALLOWAY: A. Yes.

13 Q. Now, if you go to the last page we
14 have Table 16. And you agreed that on page 16 the
15 document indicates that in Ontario -- or that Ontario
16 attains success rates of 50 per cent and 46 per cent
17 for naturally regenerated stands of spruce and pine
18 respectively.

19 Mr. Castrilli then posed -- after he
20 established that, he posed the following proposition to
21 you and I think I have it down fairly accurately. He
22 said:

23 "If you can obtain the success rates with
24 natural regeneration..."

25 Referring to those success rates that we just looked

1 at:

2 "If you can obtain those success rates
3 with natural regeneration when there is
4 little or no herbicide, it's not
5 necessary to plant and spray."

6 And your response was:

7 "Natural regeneration treatment will be
8 used and is successful there because
9 sites were the type where you expected
10 those results."

11 What did you mean by that, I didn't --

12 A. Yes, that the summary of natural
13 regeneration success is a summary of success on those
14 sites where it was prescribed. So on other sites,
15 these success numbers would not be reflective for
16 natural regeneration.

17 Q. Thank you. By the way, Mr. Galloway,
18 Mr. Castrilli's question assumed that the naturally
19 regenerated areas being reported in Table 16 did not
20 receive a herbicide treatment.

21 Now, in the material that he supplied -
22 there was only three pages that he supplied - is there
23 any indication whether the stands being referred to did
24 or did not receive a herbicide treatment, or a tending
25 treatment of any kind, for that matter?

1 A. Yes, there is. You would have to
2 give me a moment to find the exact location of it.

3 Q. You are looking at Exhibit 677, Mr.
4 Galloway?

5 A. Yes.

6 Q. Fine. I can tell you, I didn't find
7 any reference.

8 A. I guess I was referring to the first
9 paragraph above the stand ending paragraph, and it
10 refers to site preparation only. So that site
11 preparation might occur on natural regeneration areas,
12 that is correct, not tending.

13 Q. And no indication whether, with or
14 without site preparation, included herbicides -- there
15 is no indication that it did or didn't?

16 A. That's correct.

17 Q. And there's no indication what -- Mr.
18 Campion, a few questions for you. The first one
19 regarding Exhibit 643A -- pardon me, 643, not 643A.

20 DR. CAMPBELL: A. I have got it.

21 Q. Oh, I'm sorry, it is 643A I am
22 advised.

23 A. I have 643. You have got the extra
24 attachment for 633A.

25 Q. All right. And I am not -- well, in

1 643A, I think if you look at page 2 there is a
2 statement about the amount of berries that people can
3 consume?

4 A. Oh yes, right.

5 Q. All right. Is that where it says:

6 "An average-sized person would have to
7 consume..."

8 Is that the way it starts?

9 A. That's correct.

10 Q. All right. Let me just read to you
11 what my notes indicate that it states on page 2. It
12 says that:

13 "An averaged-size person..."

14 150 pounds if we convert to kilograms:

15 "...would have to consume more than 1.9
16 kg of berries every day in order to
17 exceed the ADI of .3 mg per kg body
18 weight per day."

19 A. Yes.

20 Q. What's ADI?

21 A. ADI is what they refer to as the
22 allowable daily intake, and this is the figure which
23 regulatory agencies, in this particular case the World
24 Health Organization, has determined is the amount which
25 would be safe for an individual to consume on a daily

1 basis, essentially every day for the rest of his life.

2 Q. And --

3 A. And that figure is based on -- is
4 expressed in terms of mg per kg of body weight. So
5 that is the reason why you can use the same ADI,
6 whether you are talking about a child or a very large
7 adult.

8 Q. And 1.9 kilograms is 4.2 pounds?

9 A. That's right. And that's assuming
10 that a person would be eating that every day.

11 Q. For the rest of their life?

12 A. That's correct.

13 Q. Thank you. Mr. Campbell, again
14 dealing with -- or some questions regarding the use of
15 2,4-D in forestry and by homeowners?

16 A. Yes.

17 Q. Mr. Castrilli asked if homeowners
18 aerially spray their homes and your answer was no?

19 How does exposure of humans to 2,4-D
20 compare when, on the one hand you are looking at
21 applying it aerially for forestry purposes and, on the
22 other hand, you are looking at it being applied by
23 householders?

24 A. Well, there are a number of
25 differences, of course. Obviously in our aerial

1 application scenario we are doing it generally in
2 remote areas, we have the areas closed to the public at
3 the time of spraying. The people who are involved, the
4 workers, are highly trained and are wearing protective
5 gear.

6 In the case of homeowners, there is
7 absolutely no requirement for any type of training.
8 The only precautions would be the standard boiler plate
9 which is on any pesticide label: avoid contact with
10 the skin, don't drink it, this type of thing.

11 There is also no requirement that
12 people -- people don't post areas, so obviously if a
13 homeowner sprays his lawn, people could walk over the
14 lawn, lie down and roll in it, you know.

15 Having said that, of course, I mean there
16 are also studies which indicate that the amount of
17 2,4-D which could be dislodged to represent exposure is
18 very low.

19 THE CHAIRMAN: Dr. Campbell, is there any
20 requirement under the existing legislation for
21 commercial operators in urban areas who apply chemicals
22 to residences -- to lawns for residences to post any
23 signs saying that there has been an application?

24 DR. CAMPBELL: At the present time there
25 isn't. There is a proposal by the -- under the Ontario

1 Pesticides Act to require posting under certain
2 circumstances, and I don't have it here so I can't
3 mention the specific details.

4 THE CHAIRMAN: Thank you.

5 DR. CAMPBELL: Those commercial people of
6 course do have to be licensed and trained as opposed,
7 again, the homeowners.

8 MR. FREIDIN: Q. Mr. Galloway, there was
9 evidence yesterday or there was evidence in
10 cross-examination I think both of you and Mr. Iskra
11 about the cost of applying 2,4-D and glyphosate per
12 hectare?

13 MR. GALLOWAY: A. Yes.

14 Q. There was that figure of \$40 per
15 hectare for 2,4-D and then you indicated that the range
16 would be \$30 to \$60 but the average would be \$40?

17 A. Yes.

18 Q. And is that \$40 an all-inclusive
19 figure or what things aren't included in that \$40?

20 A. The only items that would not be
21 included in that is salary of permanent employees,
22 that's just billed generally, preparation time to draw
23 up the contract and the administration-type items like
24 that. Other than that, basically all other items would
25 be charged in that cost.

1 Q. All right. Now, I appreciate that it
2 is difficult for someone who is not familiar with the
3 topic and who is trying to record or report what
4 happens.

5 A statement -- I just you want to confirm
6 whether in fact this statement is accurate or not, that
7 herbicide costs, 2,4-D of \$40 per hectare and
8 glyphosate at \$135 per hectare, do not include such
9 application costs as airplane contracts, fueling and
10 ground support?

11 A. No, that's incorrect, those are
12 definitely within the costs.

13 Q. Thank you. Mr. Churcher, in
14 cross-examination by Ms. Seaborn she suggested that BT
15 was more target-specific than chemical insecticides and
16 you agreed.

17 MR. CHURCHER: A. Yes, I believe she
18 qualified that as saying target-specific; i.e., insects
19 belonging to the order lepidotera, moths and
20 butterflies.

21 Q. Right. Now, is the fact that BT is
22 more target-specific considered to be beneficial?

23 A. Yes, that's one of the advantages of
24 using BT.

25 Q. Why is that a benefit?

1 A. Well, in the fact that it is
2 target-specific or it has a narrower range of insects
3 that it will affect as opposed to chemical
4 insecticides, some of which may be a more broad range
5 or may have impacts on other insects of other orders
6 besides just the one that you are trying to control.

7 Q. Now, Dr. Campbell, does the same
8 principle apply to herbicides?

9 DR. CAMPBELL: A. I'm sorry, you are
10 going to have to repeat it, I was daydreaming.

11 Q. All right. You are also very honest.

12 THE CHAIRMAN: And it's the first
13 admission of that we have had in this entire hearing.

14 MS. MURPHY: It's the first day of summer
15 too, I think.

16 MR. FREIDIN: I will have something to
17 say about that later, too.

18 Q. Mr. Churcher indicated just a moment
19 ago that it is a beneficial characteristic of BT that
20 it is more target-specific than perhaps chemicals in
21 that when you use BT you get the species lepidopterus,
22 caterpillars?

23 MR. CHURCHER: A. Very good.

24 Q. Caterpillars, and you don't affect a
25 whole bunch of other insects that you aren't really

1 attempting to control. And he said that was a benefit
2 of using BT or being target-specific. I am asking you:
3 Does the same principle apply to herbicides?

4 DR. CAMPBELL: A. Certainly it does and
5 this was the point that we had discussed when we were
6 talking about the herbicides, the advantage of using
7 the appropriate herbicide for the particular situation.

8 One of the examples being the case where
9 you perhaps wanted to keep aspen in a stand which you
10 were tending, a certain component of it. Using 2,4-D
11 would be a more appropriate choice in that case.

12 Q. Okay. Now, you gave evidence that if
13 you had more herbicides registered for forestry use in
14 Ontario you would be able to use more finesse when
15 using herbicides.

16 And you explained that by saying: With
17 more registered herbicides, you would be able to use a
18 minimum amount of herbicides and target the species
19 that you wanted to control.

20 I guess basically that's what you have
21 just described?

22 A. Yes, that's correct.

23 Q. Now, would having such additional
24 target-specific herbicides have any effect, in your
25 view, on the amount of the environment - and by that I

1 mean, in this case, the vegetative environment - that
2 would be affected by the use of herbicides?

3 A. Well, yes, because if you have --
4 again, each herbicide has a specific range of species
5 it affects.

6 If you take the herbicide which is most
7 effective for the species that you are particularly
8 attempting to control, then you can probably use a
9 lower rate of the chemical and you will have less
10 effect on other species.

11 You don't have obviously the same degree
12 of specificity that you do with BT in terms of insects,
13 but still you do narrow the range considerably.

14 Q. Thank you. This is a question for
15 you, Dr. Campbell. Ms. Seaborn asked Mr. Nicholson
16 with respect to the permitting system for forestry
17 purposes whether there were any use patterns for
18 application to waterbodies, and he said: Well, not in
19 forestry.

20 My question for you is: Do any of the
21 products discussed by this panel have any normal use
22 patterns for application to water?

23 A. Yes, in fact they do. 2,4-D is
24 registered for the control of aquatic weeds, and a
25 matter of interest the application rate is

1 approximately ten times the maximum rate which we would
2 use in forestry. Simazine is also registered for the
3 control of aquatic weeds.

4 Q. And if 2,4-D gets into a watercourse
5 as a result of forestry it would be by a drift beyond a
6 buffer?

7 A. That's correct. So the amount which
8 could conceivably get in during a forestry application
9 would be lower again than even our normal application
10 rate, which we say is far below what would be
11 registered for aquatic weed control.

12 THE CHAIRMAN: Dr. Campbell, where 2,4-D,
13 as an example, is used for the control of aquatic
14 weeds, what you I think mentioned, ten times the rate
15 as it is used in a forest application, has that been
16 approved in terms of water quality effects by the
17 Ministry of the Environment for that aquatic use?

18 DR. CAMPBELL: I can't speak to that
19 specifically. However, any such applications -- each
20 individual application requires a permit from the
21 Minister of the Environment.

22 THE CHAIRMAN: Are you aware of any such
23 permits having been issued?

24 DR. CAMPBELL: I believe they are. I
25 have no specific information.

1 MR. BUSS: In the area of the
2 undertaking?

3 THE CHAIRMAN: Yes.

4 MR. BUSS: I'm not sure there, but I
5 think they are given in the area of the Kawartha Lakes
6 area where they have some tremendous aquatic weed
7 problems.

8 THE CHAIRMAN: If that were the case, if
9 permits were actually issued by the Ministry of the
10 Environment, then presumably they would have approved
11 the use of the product for control of aquatic weeds in
12 terms of water quality?

13 MR. BUSS: Yes, I would assume that, and
14 the Ministry also has input into those plans and spray
15 applications.

16 THE CHAIRMAN: Thank you.

17 DR. CAMPBELL: Certainly the Ministry of
18 the Environment was actively engaged in some of the
19 research that led up to the registration of these use
20 patterns some years back.

21 THE CHAIRMAN: Thank you.

22 MR. FREIDIN: Mr. Chairman, those are the
23 questions that I would like to ask on re-examination,
24 but there is another matter that I would like to
25 address at this moment of a little lighter nature.

1 As Ms. Murphy indicated, it is the first
2 day of summer. I think a lot of us are eagerly
3 anticipating the end of the month so we can start our
4 summer break.

5 And you have, from time to time,
6 indicated the importance of having light or lighter
7 moments in a hearing such as this, particularly the
8 ones which go on for such a long time.

9 Now, there has been, with only a few
10 exceptions, a very good working relationship with the
11 parties and counsel and I think that's something that
12 we can all be proud of.

13 But I should advise you that today I have
14 an opportunity to both provide a lighter moment and to
15 cause a contribution of at least \$100 to be made to the
16 Heart and Stroke Fund.

17 MS. MURPHY: Perhaps the Stroke Fund.

18 MR. FREIDIN: Well, the Stroke Fund, I
19 may be the first recipient of the hundred dollars.

20 Now, in the past, Mr. Chairman, I have
21 sung at these hearings and I must say without, I might
22 add, an environmental assessment which is usually
23 necessary for noise-causing undertakings by government.

24 MS. CRONK: Let's get on it with it.

25 MR. FREIDIN: Even though it may be

1 through someone retained by the government.

2 THE CHAIRMAN: In order for this donation
3 to be made, is it necessary for the Board to remain
4 present?

5 MR. FREIDIN: Absolutely. Now --

6 MR. CHURCHER: Those were part of the
7 terms and conditions.

8 MR. FREIDIN: Now, let me finish this, I
9 prepared this.

10 Now, when I sang to Mr. Hynard I did not
11 intend to be disrespectful to the Board or the process
12 in any way, and I don't believe my actions were seen as
13 being disrespectful in any way, Mr. Chairman.

14 And assuming that I am correct, I would
15 like to ask for the indulgence of the Board once again
16 to, as I have said, allow me to provide a lighter
17 moment and, more importantly, to facilitate a donation
18 of the magnitude and the type that I have described.

19 THE CHAIRMAN: Well, in the interest of
20 charity, solely.

21 MS. CRONK: I would like to say something
22 about cruel and unusual punishment.

23 THE CHAIRMAN: We will close our eyes and
24 swallow hard.

25 MR. FREIDIN: Well, Mr. Chairman, the

1 song that I would like to sing, I had great concern
2 about what it was going to be because the song which
3 had been suggested to me by someone, who will remain
4 nameless, was one that I didn't know the words to
5 except for the opening few lines.

6 And this morning, I must say, that I was
7 almost more concerned with the words to the song than I
8 was with the re-examination.

9 So what I did is, I decided that I would
10 compose my only little song, a song which is in the
11 nature of re-examination.

12 THE CHAIRMAN: Are we allowed to give a
13 weighting to your re-examination in light of what is
14 about to come?

15 MR. FREIDIN: Well, Mr. Chairman, I think
16 that the onus on you is going to be much more -- much
17 greater than that because this is a question in the
18 nature of re-examination which is being posed to you
19 and I would like to ask for your answer when I am
20 finished.

21 And so the little song goes - and I do
22 apologize for all the notes I am going to sing off
23 key - and my question for you, Mr. Chairman, is as
24 follows:

1 Michael, Michael, give me your answer
2 true:

3 Will you be real happy when the whole
4 case is through?

5 There won't be a speedy ending, but no
6 one will we be offending,

7 If we move along fast, so the hearings
8 won't last, until we are all 92!

9

10 (applause)

11 MR. FREIDIN: And the answer, Mr.

12 Chairman?

13 MS. CRONK: I think if you require
14 independent counsel, sir, I think it's appropriate...

15 THE CHAIRMAN: I think we will take it
16 under advisement, and I don't think we will put an
17 answer on the record.

18 I take it that this undertaking of yours
19 having been completed, the money will be forthcoming
20 and that the appropriate charity will benefit?

21 MR. FREIDIN: That is correct. I think I
22 have named the charity.

23 I must advise, I had commitments which
24 allowed me to make the comment as to the minimum amount
25 and, of course, if anyone wants to add to that

1 contribution, I am sure the Heart and Stroke Fund would
2 be most appreciative.

3 MR. HYNARD: Just to reiterate, Mr.
4 Freidin's words from yesterday, I would rather listen
5 to a forester.

6 MR. FREIDIN: Well, Mr. Hynard, if you
7 want to sing, we will listen.

8 I have nothing further, Mr. Chairman.
9 Thank you.

10 THE CHAIRMAN: Okay. Thank you,
11 everyone.

12 We will adjourn now until Monday at 1:00
13 p.m. Although we would like an indication how long you
14 might be next week in terms of the
15 examination-in-chief?

16 MR. FREIDIN: Two and a half. So it is
17 between two and three days.

18 THE CHAIRMAN: Okay. So we will finish
19 definitely by Thursday?

20 MR. FREIDIN: We have every intention of
21 finishing next week. I mean, if we go over into
22 Thursday, it will be unexpected, so we hope we will
23 definitely anticipate finishing next week.

24 THE CHAIRMAN: Okay. Very well.

25 Ms. Cronk, do you have something further?

1 MS. CRONK: Yes, Mr. Chairman.

2 I wonder if Mr. Freidin or Ms. Murphy are
3 in a position to assist us, if they can, as to what
4 they anticipate the line-up of witnesses will be from
5 and after August 8th.

6 As you will appreciate, some of us won't
7 be here next week and we have experts to make
8 arrangements with so they can be in attendance for the
9 continuation of the evidence on this panel.

10 THE CHAIRMAN: Okay. And I think the
11 Board would also like an indication as to when the
12 experts will be called with respect to the effects of
13 pesticides on human health and confirmation that the
14 experts will be called together.

15 MS. MURPHY: Yes. I understand that
16 that's a matter of interest. I haven't had an
17 opportunity to spend any time in the office in the last
18 little while, now obviously I can, and I hope to be
19 able to advise certainly before the Board rises for the
20 break.

21 THE CHAIRMAN: Okay.

22 MS. CRONK: Sorry, sir. Can I at least
23 know whether during the week of August 8th it is
24 intended that one or more of the remaining witnesses on
25 protection are going to be called, or is it intended by

1 MNR that we are going to continue with the roads
2 evidence?

3 MS. MURPHY: Oh, yes. The situation is
4 that starting August 8th there will at least obviously
5 be Mr. Kingsbury. We would be going back to Panel
6 13 -- Panel 12 and 13, given that we had to deal with
7 Kingsbury in August. So it would not be
8 cross-examination.

9 THE CHAIRMAN: Well, okay, but we are
10 back into the issue of dealing with Dr. Kingsbury and
11 Mr. -- is it Dr. or Mr.?

12 MS. MURPHY: Dr. Ritter.

13 THE CHAIRMAN: Ritter. Once again, the
14 Board feels those two witnesses should be heard
15 together. If one or the other is not available, then
16 we would suggest the Ministry seriously contemplate
17 rescheduling them so that they can be heard together.

18 MS. MURPHY: Again, it is difficult to
19 deal with the matter right now until I have had an
20 opportunity to talk to them.

21 THE CHAIRMAN: Okay. Well, I guess, Ms.
22 Cronk, we can't definitively give an answer to that
23 until probably at least next week--

24 MS. CRONK: Thank you, Mr. Chairman.

25 THE CHAIRMAN: --as far as the

1 scheduling.

2 I might remind the parties, however,
3 there are a few procedural matters that we will be
4 dealing with on August 8th as well.

5 Perhaps some of the parties can help us
6 out. We thought there was some sort of deadline,
7 perhaps it was just the statement of issues that had to
8 be filed by August 8th; is that correct?

9 MR. FREIDIN: Panel 15.

10 MS. MURPHY: I believe it was the Panel
11 15 statement of issues, I think was the one thing that
12 was slated for that day.

13 THE CHAIRMAN: All right. Well, the
14 scoping session would probably take place later that
15 week for that panel.

16 Thank you.

17 ---Whereupon the hearing adjourned at 12:20 p.m., to be
18 reconvened on Monday, June 26th, 1989, commencing at
19 1:00 p.m.

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